

Desert

SEPTEMBER, 1958 . . 35 Cents





Hopi Children

It was a hot day in August when Ross Carmichael of Reseda, California, pointed his camera at these Hopi children. The result was a delightful picture depicting the universality of children's moods — the highly amused little girl, the far-from-amused infant in her arms, and the lad standing behind them who obviously is more interested in Carmichael's work than in the routine squawking of his young friend. This month's first prize winning photograph was taken with a Speed Graphic 4x5 camera; Carl Zeiss Tessar lens; Plus X film; f. 16 at 1/50 second.

Pictures of the Month

Elephant Trees

This is how Louise S. Lovett of Santa Cruz, California, describes the subject matter of the second award photograph: "Elephant trees have bark like dirty flesh with rude wounds; purple twigs; light green leaves; blue berries . . ." This tree is among the earth's most unusual vegetable species, and is a major attraction of the Anza-Borrego State Park in Southern California. The photograph was made at the park in the spring of this year with an old Eastman Kodak (1920) set at f. 11, 1/100 second.



LETTER

To the Readers
of *Desert Magazine*:

Thanks to the interest and loyalty of you who have been regular readers of *Desert Magazine*, the publishing business which I founded in 1937 has grown and prospered. But its growth has imposed ever-increasing duties on my shoulders: the management of a book publishing and general printing business, the operation of a retail and mail order book shop, the sponsorship of a desert gallery of fine arts and crafts, and the securing of competent personnel for a growing organization—all these duties in addition to the editing of *Desert Magazine*.

It has become too big a job for one man, and I have looked forward to the day when I could relinquish all the details of business management, and devote my time exclusively to the job I liked best—editing and writing for *Desert Magazine*.

Today, I am glad to announce that as of September 1, my goal will be realized—I will be free to write for *Desert Magazine*, with no distractions of a commercial nature. On this date the ownership and business management of the Magazine will pass to the hands of a group of very fine associates of whom Charles E. Shelton will be the publisher and principal owner. I say "associates" because I am still a part of the organization, not only as editor but also as part owner and a director in the newly formed corporation.

In our printing, publishing and book business, Shelton will be my new boss. I selected him for the job very carefully because I want *Desert* always to maintain the ideals of service, accuracy and integrity which I have sought to maintain since *Desert* was founded.

I have known Chuck Shelton for many years. He is a young man who turned down the vice presidency of one of Southern California's leading colleges because he preferred to come to the desert as the publisher of *Desert Magazine*. During the years when he published the *Glendora Press* and the *Azusa Herald* in Southern California, he made an enviable record for himself, both for clean constructive journalism, and for a high standard of business ethics. Chuck has tramped and explored the desert as I have. He loves this land of the far horizons and golden sunsets. You'll like Chuck.

No changes are planned in the personnel of our organization. Gene Conrotto, not only will remain as associate editor, but he is now one of the owners—a member of the new corporation.

If there are changes in *Desert*, they will be for the better, I assure you.

RANDALL HENDERSON
Editor



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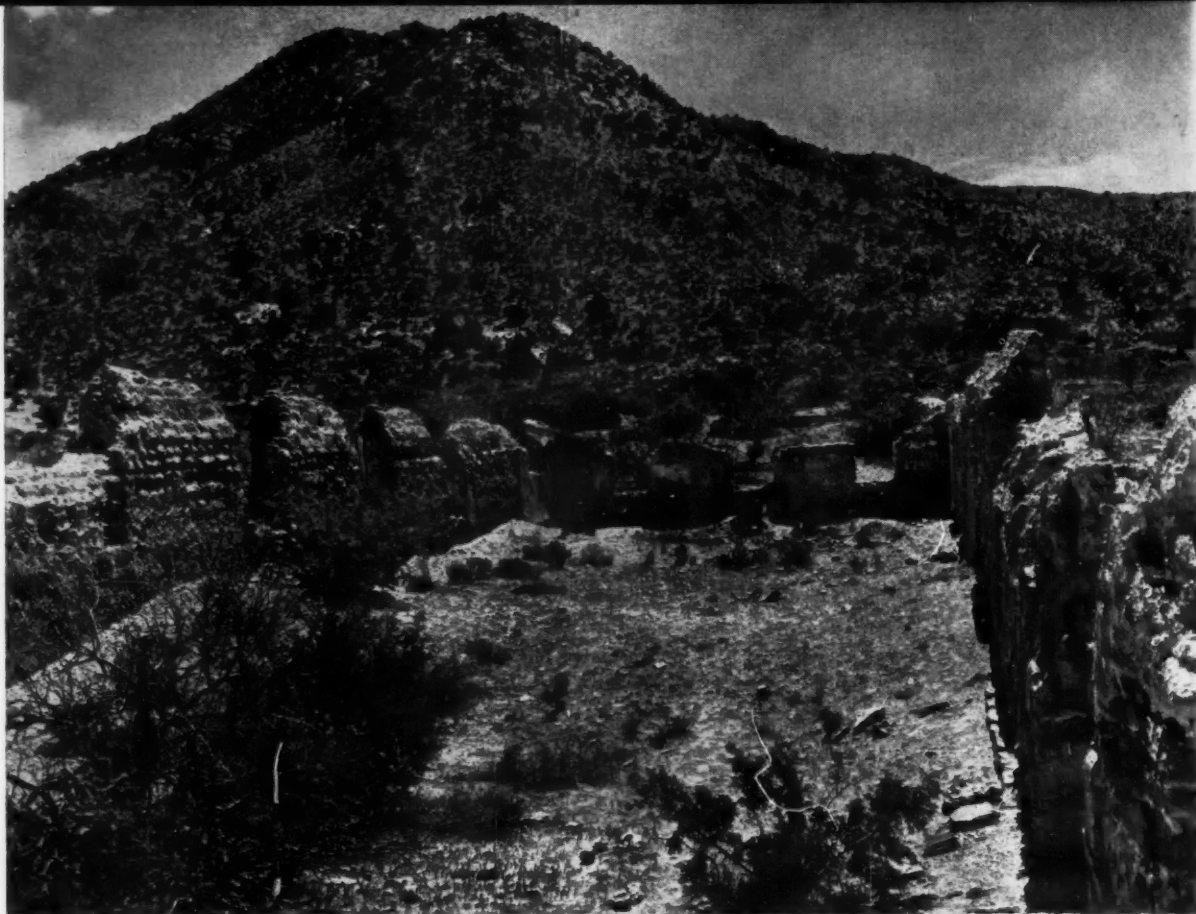
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HISTORIC PANORAMAS XIX

Old Fort Bowie

By JOSEF and JOYCE MUENCH

In 1862 this fort, named to honor George W. Bowie of the California Volunteers, was established as a protection for Apache Pass, perhaps the most dangerous point on the long immigrant road to California. Cutting between the foothills of the Dos Cabezas Mountains and the Chiricahuas, the pass itself winds and twists, offering in rocks and low trees, excellent ambush possibilities for the Apaches.

On a hilltop and sunny slopes, adobe walls of the fort and outlines of some thirty other structures form impressive ruins for the busy post, abandoned in 1896 and sold to local ranchers and farmers in 1912. Vandals have carried away window frames and whatever else was removable but there is talk of restoration and possible national monument status for the site.

Reached off State 86 from Bowie, the area is dotted with spots where soldiers or immigrants encountered Indian raiding parties and several of them are marked, as the site of a wagon train massacre of 1861 up in the Pass.



Indians parading in the Plaza. New Mexico State Tourist Bureau Photo.

WHEN THE *torjas* overflow with grain in late summer, vegetables and fruit have been gathered, and the pumpkins in the fields await the kiss of some frosty night, New Mexicans prepare for the great celebration.

The house is made ready. Outside walls are whitewashed, and the fence mended. Blankets and rugs are taken to the creek for washing. Then comes the matter of costumes. Closets are ransacked — colorful purple shirts

Mariachi de Chapal. Santa Fe Railway Photo.



Fiesta Time in Santa Fe

By AIDA CALHOUN



Zozobra — Old Man Gloom. His burning signals the start of the festival. New Mexico State Tourist Bureau Photo.

trimmed in pink, green skirts fringed with yellow — laces and jewels are carefully inspected.

It is time for the Fiesta, and in New Mexico's capital city of Santa Fe this celebration is as spectacular and thrilling as Louisiana's Mardi gras or the pre-Lenten carnivals of the Old World.

This year Santa Fe's Fiesta begins on Friday, August 29, with the traditional burning of Zozobra (Old Man Gloom), and continues through Monday, Labor Day, September 1.

This is the time for little children

CALENDAR

ARIZONA

August 11-September 14—Mary Russell Colton Exhibit at Museum of Northern Arizona, Flagstaff.
 August 30-September 1—Labor Day Golf Tournament, Douglas.
 August 30-September 1 — Pioneer Days Rodeo, Kingman.
 August 30-September 1 — Rodeo, Williams.
 August 31-September 1 — Rodeo, Kingman.
 September 1—Cucumber Festival and Rodeo, Taylor.
 September 6—Dick Wick Hall Day, Salome.
 September 6-14 — National Home Week event: March of the Models, sponsored by Home Builders Association, Phoenix.
 September 12-14 — Navajo Tribal Fair, Window Rock.
 September 12-14—Coconino County Fair, Flagstaff.
 September 12-14 — Navajo County Fair, Holbrook.
 September 15-16—La Fiesta Patrias, Glendale.
 September 19-21 — Yavapai County Fair, Prescott.
 September 20-21—Annual Rex Allen Days, Willcox.
 September 20-21 — Jaycee Rodeo, Winslow.
 September 26-28 — Cochise County Fair, Douglas.
 September 27-28 — Mojave County Fair, Kingman.
 September 28-30 — Gift and Jewelry Show, Hotel Westward Ho, Phoenix.

CALIFORNIA

August 29-September 1—Fiesta, Morongo Valley.
 August 30-September 1 — Homecoming and Rodeo, Bishop.
 September 4-7—Antelope Valley Fair, Lancaster.
 September 6—20 Mule Days, Boron.
 September 26-28—11th Annual Colorado River Outboard Marathon, community Diamond Jubilee parade, Needles.

NEVADA

August 29-September 1—County Fair and Livestock Show, Elko.
 August 30-September 1—Labor Day Celebration, Sparks-Reno.
 August 30-September 1 — 30th Annual Nevada State Rodeo, Winnemucca.
 August 30-September 1—Lions Stampede, '49er Show, Fallon.
 August 31-September 1—Labor Day Rodeo, Eureka.
 September 1—Labor Day Celebrations at Ely and Pioche.
 September 6-7—Southern California Water Ski Championship Races, Lake Mead.
 September 8-9—Annual Jazz Festival, Virginia City.
 September 11-14 — Washoe County Fair, Reno.
 September 13 — Lions Club Horse Show, Tonopah.
 September 13-14 — 4-H Junior Fair, Fallon.
 September 27 — Jacks Carnival, Sparks.

NEW MEXICO

August 29-September 1 — Annual Fiesta, Santa Fe.

August 31-September 1 — World's Championship Steer Roping Contest, Clovis.
 September 2 — St. Stephen's Day Fiesta and Dance, Acoma Pueblo.
 September 6-7—County Fair, Socorro.
 September 6-8—Harvest Dances, San Ildefonso Pueblo.
 September 11-13—Dona Ana County Fair, Las Cruces.
 September 12-14—Quay County Fair, Tucumcari.
 September 12-14—Sierra County Fair, Truth or Consequences.
 September 15 — Ceremonial Dances and Races, Jicarilla Apache Reservation.
 September 16-21—San Juan County Fair, Farmington.
 September 17-20 — Curry County Fair, Clovis.
 September 18-20 — Hidalgo County Fair and Old Timers' Day, Lordsburg.
 September 18-21 — Colfax County Fair, Springer.
 September 19 — Ceremonial Dances and Fiesta, Laguna Pueblo.
 September 19-20—Otero County Fair and Rodeo, Alamogordo.
 September 19-20 — Valencia County Fair and Sheriff's Posse Rodeo, Belen.
 September 19-20 — De Baca and Guadalupe Bi-County Fair, Ft. Sumner.
 September 19-21 — Hidalgo County Fair, Sheriff's Posse Rodeo, Old Timers' Parade (on 19th), Lordsburg.
 September 23-25 — Union County Fair, Clayton.
 September 23-26—Roosevelt County Fair, Portales.
 September 27-October 5—New Mexico State Fair, Albuquerque.
 September 27-28—San Miguel Fiesta, Socorro.
 September 29-30 — Fiesta of San Geronimo on 29th, Sun Down Dance on 30th, Taos Pueblo.

UTAH

August 30-September 1—Iron County Fair, Parowan.
 September 1 — Cantaloupe Day Parade, Bountiful.
 September 1 — Labor Day Celebrations at Price, American Fork, Park City and Milford.
 September 1 — Founder's Day Celebration, Wellsville.
 September 1-3 — Motorcycle Races, Bonneville Salt Flats.
 September 2 — Pony Express Relay from Vernal to Tooele.
 September 4-6—Peach Days Celebration, Brigham City.
 September 5—Southern Utah Livestock Show, Cedar City.
 September 6—Community Fair, Lindon.
 September 6—Interstate Riding Club Meeting, Nephi.
 September 6-7—Sanpete County Fair, Ephraim.
 September 12-13 — County Fair, Nephi.
 September 12-21—Utah State Fair, Salt Lake City.
 September 13-14 — Galena Days, Brigham Canyon.
 September 17-19—Metal Mining and Industrial Mineral Convention of the American Mining Congress, Salt Lake City.

and *los viejos* to forget all but joy and gaiety. It is a time of fun for the Indians, Anglos and Spaniards—most of all, the Spaniards, descendants of the conquistadores who settled here in the late 16th Century. All three peoples making up the population of New Mexico go about the business of celebrating this most important occasion in their chosen way.

The Fiesta is America's oldest community celebration, and has been held in Santa Fe since 1712. It takes place during early September for a special reason. In 1680 the Pueblo Indians rose against their Spanish conquerors and after a bloody siege took the Palace of Governors in Santa Fe. Many Spaniards, including 21 priests, were massacred, and the settlers driven back into Mexico. But 12 years later, Don Diego DeVargas peacefully reconquered the province. On September 14, 1692, Spain's royal standard again flew over Santa Fe. DeVargas then returned south, and the following year brought the colonists back to Santa Fe. But the Indians gave battle this time and were defeated. The Fiesta is a prolonged celebration of this momentous turn in New Mexico's history.

Visitors arriving in Santa Fe for the Fiesta are met with a gentle sun slanting across the plaza, and the pungent odor of cedar, lavishly used in decorating the bazaar booths, which fills the thin air. The startling costumes of three distinct nations flaunt their styles and colors to bedazzle the eyes.

After absorbing the shock of being projected backwards into an atmosphere of bygone centuries, I begin to enjoy the mythical tranquility that settles over the gay scenes. Every corner of the plaza is a different picture.

A group of *senoritas* pass. Their gorgeous costumes swish as they stroll along the tree-lined path. Their soft Spanish conversation drifts back, and they are gone.

On a bench sits a wrinkled great-grandmother of one of the Pueblo tribes. She is weighed down with silver and turquoise jewelry probably worth \$1000. Other tribesmen squat along the sidewalk nearby. Some Indian men, it is said, squat before their wares throughout the four days of the celebration, and then limberly scuttle up and away as if they had been resting in platform rockers. These Pueblos are stolid-faced, withdrawn, quiet—but more picturesque than others at the Fiesta.

The Mexican costume fits into the scene perfectly. Blouses are richly embroidered, skirts billow in gorgeous colors—white teeth flash in smiles to strangers.

Children are taught from infancy

the why and wherefore of the celebration. They are trained in the religious part as well as the historic ceremonials and merry-making. In the candlelight procession from St. Francis Cathedral to the Cross of the Martyrs, a service honoring the martyred Franciscan Fathers, little girls in their blue and yellow full skirts, Spanish combs and black lace mantillas, march in the grand manner that well becomes the descendants of conquistadores.

Among the most authentic of Fiesta survivals is the DeVargas Pageant staged before the old Palace of Governors. This historic drama re-enacts DeVargas' conquest of New Mexico, and his reading of the royal proclamation in the Plaza.

Just as the rays of the dying sun are sending a glow from across the mountains, the tranquility is shattered. Voices and laughter, the muted string band hidden some place in the shrubbery are stilled for a moment. The blare of a brass band is heard down the street.

"The parade! The parade!" shout voices in three languages.

And what a parade! Every foot of it steeped in the alluring mystery of Old Mexico; the antiquity of the Spanish Main; the color and atmosphere of the Pueblos. No blending of three nations could turn out to be a more spectacular appeal to sight and senses.

A dozen Castilian riders atop snow white horses march ahead of the band. An old carriage—a veritable ghost of the past — comes wheeling along, drawn by high-stepping chestnut horses. In the ancient vehicle sits a gorgeously costumed senora stitching away on a yellowed piece of embroidery. Following this is a Mexican band, then floats, street dancers, two expert Spanish Fandango dancers performing on a float. Proud Indians, blanketed and in full feathered dress, followed by burros, trappers and miners, pass. And while the soft strains of *La Golondrina* fade down the street, night falls over the Plaza and Old Santa Fe.

Here are highlights from this year's Fiesta schedule:

Friday, August 29—7 a.m. DeVargas Mass at St. Francis Cathedral; 8 p.m. Burning of Zozobra; 8 p.m. Crowning of Fiesta Queen at St. Francis; 9:30 p.m. Enthronement and Investiture of Fiesta Queen in Plaza.

Saturday, August 30 — 10 a.m. Children's pet parade; 4 and 8:30 p.m. Indian dances at Old Palace; 9 p.m. Conquistadores Ball and Baile Ranchero.

Sunday, August 31 — 9:30 a.m. Pontifical Procession; 2:30 p.m. Entrada of DeVargas and Pageant in



Neighboring Pueblos display their wares to tourists in Palace of Governors corridor. Santa Fe Railway Photo.

Plaza; 3 p.m. Merienda de la Fiesta at St. Francis Auditorium; 4 p.m. Indian Dances at Old Palace; 7:30 p.m. Vespers at St. Francis followed by Candlelight procession to Cross of Martyrs; 9 p.m. DeVargas Dance.

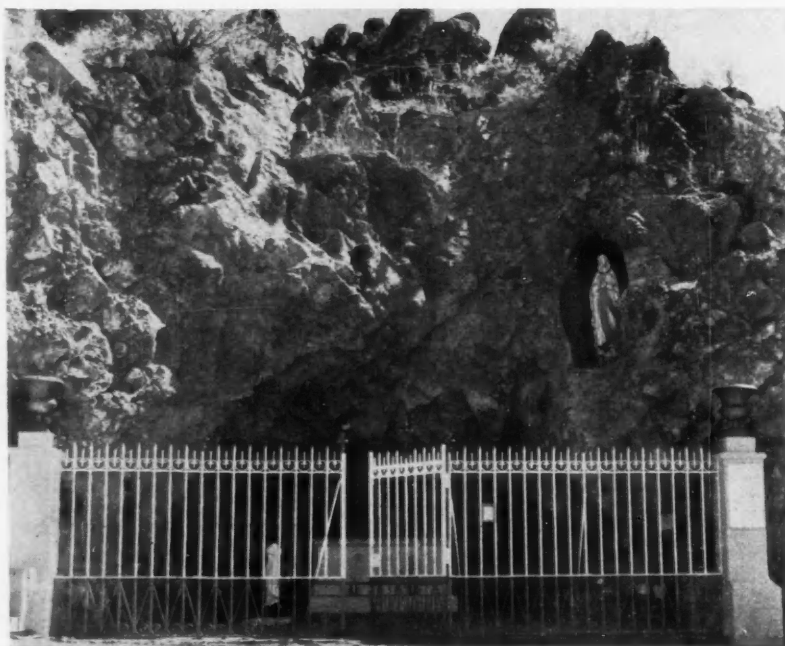
Monday, September 1 — 3 p.m. General Fiesta Parade; 8 p.m. Queen's Review of 1958 Fiesta at Plaza.

In addition to the above events, there will be street dancing, Indian bazaar booths, kiddie rides, folk music.



DeVargas Pageant commemorates the re-conquest of New Mexico. It is staged during the Fiesta before the old Palace of Governors.

Arizona's Shrine to Bernadette . . .



Replica of the Shrine to Saint Bernadette of Lourdes erected 50 years ago by the Bishop of Tucson. Photo by the author.

In this Centennial Year of the visions of Saint Bernadette at Lourdes, a measure of deserved attention is being paid to a seldom-visited, little-known replica of the famed French shrine erected a half-century ago near Mission San Xavier del Bac in Southern Arizona.

By HAROLD L. MONROE

ON THE SIDE of a small rocky hillock less than a mile east of Southern Arizona's beautiful Mission San Xavier del Bac (*Desert*, August '57) is a startlingly accurate replica of one of the world's most famous shrines — Bernadette's Grotto near the city of Lourdes in France.

According to the legend, a hundred years ago this year the 14-year-old French maiden, Bernadette Soubirous, beheld on 18 separate occasions a vision in a mountain grotto near Lourdes. This girl told of how in this vision the Blessed Virgin had appeared and bade her to bathe in the waters of the grotto. Bernadette went to her knees and dug in the earth where there was no water, and shortly there sprang forth a fresh clear spring.

Some of the townspeople were

skeptical of this poor illiterate young lady's tale. But there was the water flowing in a stream to prove her statement, and many were convinced a miracle had happened. They came and also bathed in the sacred waters. Presently some who had suffered ailments reported marvelous recovery. More and more of the people began to believe, and in 1933 the Catholic Church made Bernadette a saint.

Most are familiar with the story of Bernadette and that a shrine was constructed at the grotto of her vision, but few know that the Southwest also has its Shrine to Bernadette. The inscription carved in a marble slab on one of the steel posts of the fence before it, reads: "Erected by the Bishop of Tucson A.D. 1908 the Fiftieth Anniversary of the Wondrous Apparitions of the Blessed Virgin Mother of God at the Grotto of Lourdes."

Mission San Xavier Del Bac, gleaming white in the rays of the desert sun, was founded by the beloved Jesuit Padre Eusebio Francisco Kino in 1700. This mission is acclaimed by many as the greatest of the chain established by this good Father. Located on the Papago Indian Reservation, it is the only one of these missions still used by the Indian Catholics as a house of worship.

Although a visit to San Xavier is a must on the schedule of a large percentage of visitors to Southern Arizona, it seems that few make the short walk to the shrine. I saw no one at the shrine during my last visit there, despite the fact many out-of-state cars were parked at the mission.

Aside from possible benefits that might be derived from bathing in the water that flows from the spring at the original Lourdes Shrine, pilgrims report a feeling of love and peacefulness that enfolds them after entering the grotto. One late summer while visiting the shrine at San Xavier the Arizona sun was bearing down with such force that I was quite uncomfortable — yet as I stood gazing at the Holy Figure in the niche in the rocks, just such a feeling of love and peacefulness crept into my whole being.

Around 2,000,000 people visit the Shrine at Lourdes each year, and it is expected that during this Centennial Year as many as 7,000,000 may do so. No doubt there are millions of others who would like to visit Lourdes, but are unable to do so. Perhaps some of these people who reside in the Southwest would find a visit to Our Lady of Lourdes in our own desert a delightful substitute.

AIR CONDITIONING IS NO TAX DEDUCTION BONANZA

Air conditioning is no longer regarded as a luxury on the desert, but neither is it the income tax deduction windfall some have been led to believe on interpretations of medical expense rulings. However, it can be claimed as a deduction in some individual cases.

Wilson B. Wood, director of the Internal Revenue Service for Arizona, announced a new IRS ruling which clarifies the air conditioning situation.

The bureau cannot make individual determinations in advance. As with other medical expenses, the need must be substantiated by evidence, interpreted as a doctor's statement of the need to alleviate the health condition, usually asthma, hay fever or heart condition.

Capital outlay for the air conditioning unit, and the amount for its operation and cost, must further be related only to the sick person, and purchased for his benefit, and not be for a permanent improvement or betterment of the property, Wood explained. — *Phoenix Gazette*



Charles V. McClure made his first prospecting trip to Rattlesnake Canyon on July 4, 1941.

Gold Diggings in Rattlesnake Canyon

By EUGENE L. CONROTTO
Map by Norton Allen

DAWN FOUND our Jeep climbing Morongo Pass which links the low Colorado Desert near Palm Springs, California, and the high Mojave Desert. In the small scattered community of Yucca Valley, my traveling companion, Mel Harrison, swung the vehicle west toward the rose-tinted slopes of the San Bernardino Mountains, and soon paved roads and the complex problems of a troubled world were behind us.

In my pocket was an invitation from old-timer Charles V. McClure to visit his gold claims in Rattlesnake Canyon, a north-trending gorge on the desert flank of the range. "All are

welcome," he had written, "and be sure to bring your dry washers. I'm offering rockhounds a free chance to pan a little color here . . ."

To paraphrase George Wharton James, who described the Morongo Pass as a "peculiar piece of desert," the higher country west of Morongo is a truly delightful piece of desert—surprisingly little known by desert devotees who prize such out-of-the-way places.

The hard surface dirt road winds among huge rounded boulders so typical of Joshua Tree National Monument on the opposite side of the Pass, then climbs up through Burns Canyon

Here's your invitation to visit a little-frequented desert mountain area—pan for gold—camp out under pine trees—marvel at giant Joshuas—and follow a rugged canyon trail to a mining relic of the 1920s. The northern slopes of the San Bernardino Mountains offer a rich harvest ground for the summer weekend explorer, for here is combined the rugged beauty of mountain wilderness and the charm of the desert.

bordered by several cozy and attractive mountain retreats. One steep-gabled cabin, painted a brilliant red and trimmed in white, conveyed the joy of living its owner must feel when he arrives here for a weekend stay.

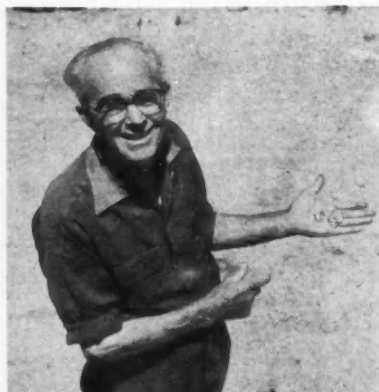
Beyond Burns Canyon is a wide 5500-foot-high basin, and here the trail is an aisle through one of the grandest Joshua tree stands on the Mojave Desert. Forty and 50 foot giants they are, and while there may be individual trees in other parts of the Mojave Desert taller than any we

saw that day, I doubt very much if any area can claim Joshuas that match these on the northern slopes of the San Bernardino in average height. The general floral picture here is that of high desert species where granitic and similar soils predominate. Prince's plume (*stanleya pinnata*), sagebrush and Mojave prickly pear are quite abundant.

McClure had written that there are so many forks and cross-roads on the basin, detailed directions to his diggings would be useless.

"Every time you come to a fork in the road, stop and look for my sign—it'll be there," he had said.

The first McClure sign is at the main junction on this road. It pointed right or north down Rattlesnake Canyon. The branch which continues westward leads to Big Bear Lake and



McClure holds gold nuggets found in Rattlesnake Canyon.

Valley, a popular mountain resort area. San Bernardino National Forest

Ranger Earl E. Nichols recently reported that major improvements are slated for the Big Bear to Yucca Valley road. At present it is negotiable by conventional cars providing the drivers use care over the few rough spots. When these repairs are made, I predict many hundreds of folks will discover the wonders of this back-country paradise.

Nearing the McClure property, the road winds to the base of a chaparral-covered rocky ridge. Dotting the hillside are the greens and reds of manzanita, and in the flat stretch below McClure's well-built cabin 40-foot pine trees grow alongside 40-foot Joshua trees.

McClure welcomed us warmly. He is thin and wiry, and the long white strands of hair on his weather-etched face are forever being brushed into place with quick motions of his tough brown hands.

He was born in Illinois 72 years ago—a farmer's son. When nearly 50 years of age—a time when a man seriously begins making solid plans for his retirement years—the depression struck.

In 1934, without a job or much money and no skill save that of farming, he migrated to California.

"In those days \$10 would buy enough grub for a fellow to stay in the desert a month," McClure explained. "So rather than lay around the house and helplessly watch mother—that's what I call my wife, Charlotte—try to support the family with her nursing job, I took to prospecting.

"I sure got the gold fever," he grinned. "I prospected the Turtles, Chuckawallas and a whole string of other mountains.

"I averaged about a dollar a day—including a \$100 nugget now and then. You can see there were plenty of days I dug for nothing.

"But, there's no place I worked that I liked as much as these diggings," he said, sweeping an arm over the miles of rugged rolling mountain country surrounding us. "Every place I panned, I found color."

Many jobless men turned to gold mining in the '30s, and even the current recession has sent a few to gold bearing streams and placer grounds to try their luck. Weekend miners are paying more attention to their claims, and mining journals are clamoring more vociferously than ever for a return to the gold standard.

But not McClure. "The price of gold is all right," he said, "all the other prices are out of line."

Gold mining in the San Bernardino Mountains began in 1859 with dis-



coveries in Bear Valley. A considerable rush followed, and the next autumn another strike was made in nearby Holcomb Valley. These diggings were shallow and easily worked. In 1870 a 40-stamp mill was erected in Bear Valley. It burned soon afterward, and smaller mills were built. But bad luck of one sort or another continued to plague the mining operations. When the miners left the diggings and wandered off to the four compass points, they did so with shovel in hand and eyes glued to the ground.

It was some of these old bucks, as McClure calls them, who re-discovered the old Spanish diggings in the Rattlesnake Canyon area. A few stayed on for a week, others for an entire summer, some returned year after year. A new crop of self-employed miners appeared in the '30s, but eventually all drifted on—except McClure. He took up 12 claims—240 acres—embracing a series of low parallel hogbacks, the gold-bearing conglomerate piled here by glacial action. Then he developed a water supply at a spring a few hundred feet above the cabin (every length of pipe had to be dragged by hand up the sharp incline), cut roads to connect his prospect holes so he could more easily keep up his assessment improvements — and here he stands today upon a million dollars in gold, hoping against hope that some backer with capital, heavy equipment and know-how will come along to separate the metal from the gravel.

In the meantime, Charlotte continues her nursing duties at Palm



The Yucca Valley to Big Bear back road in the basin of giant Joshua trees.

Springs to grubstake her husband. She spends her free time at the cabin, shoveling dirt into a dry washer, hand-picking color out of the concentrating tables, and sharing his dreams.

McClure took a carefully wrapped packet from a cupboard and handed me an assay report made on a sampling from his claims: \$200 a ton of ore in gold; \$2 silver; \$800 titanium; \$80 mercury; and \$70 silicon.

"Tell the rockhounds they can come up here anytime they want—I'll show them where they can pan and camp," he said. "It gets kind of lonely on this hill, and I like company." There are

many active claims in this vicinity, but only McClure lives here during the greater part of the year.

"Not many people in Rattlesnake Canyon," he went on, "but plenty of deer, bobcat, lizards, coyotes, skunks and even a few rattlesnakes which gave this place its name." He reported an interesting fact: each summer has seen a marked decrease in the number of rattlers encountered in the canyon. In the past two or three summers he has not seen one.

Laurence M. Klauber, in his monumental two-volume work, *Rattlesnakes, Their Habits, Life Histories, and Influence on Mankind* (Desert, May '57), states that in Southern California there are 13 Rattlesnake canyons, seven creeks, three mountains, two peaks, two springs, one valley, one camp and one meadow. This testifies to the impact made by rattlesnakes on Western emigrants.

We spent several hours riding and hiking over McClure's property. We inspected the prospect holes, dug into the exposed pay dirt banks, followed the "old bucks'" paths over the gravelly ridges, crawled into tunnels, wandered amongst the Joshuas and pines, and climbed the slope to the spring and reservoir. Everywhere we went we saw the tremendous amount of work expended on a project which so far has yielded less than pennies for each hour of labor.

There are countless pine-scented campsites on McClure's property, and plenty of deadwood and fresh spring water. According to Ranger Nichols, camping and building fires on the claims are permissible providing the visitors

Mel Harrison inspects a pine sapling which McClure says has not shown any signs of growth in the past 17 years.



have McClure's permission, and all requirements of the State Fire Code are met.

Altitude at the cabin is 5650 feet. Snow blocks the trails from the first of November to the early spring thawing. In 1949 McClure was snowed-in for 51 days, during which time he "read everything in the cabin—two and three times."

The trail down Rattlesnake Canyon should only be attempted by Jeeps. The canyon opens up on the desert floor in the Old Woman Springs vicinity, a famous watering place much used by early Indians, prospectors and cattlemen.

From McClure's diggings Mel and I retraced our route through the peaceful Joshua basin and down Burns Canyon. Three miles west of Pioneertown, a miniature Knott's Berry Farm Western tourist town on the Big Bear-Yucca Valley road, we turned eastward on the well-marked Pipes Canyon road. We followed the trail to Pipes Public Camp and the inactive

quarry beyond, long a favorite collecting area for a colorful banded white and yellow sandstone material. Amateur gem cutters use it for spheres, bookends, cabinet specimens and garden stones.

Pipes Canyon cuts deeply into the northeastern flank of the rugged range which ascends sharply to crest at 11,485-foot San Gorgonio Mountain, about a dozen miles southwest of the onyx mine.

The higher we climbed the narrower and steeper the trail became, and the closer against its sides pressed the thick green vegetation. In many places the cold mountain stream rushes across the wheel tracks, but the road is firm. Mel and I played a mental game at every twist in the canyon: would standard autos be able to make this trip?

Nearing the public campsite we had been jarred to near numbness by the chuckholes in the tortuous road, and had decided that this was no place for today's luxury autos—when down



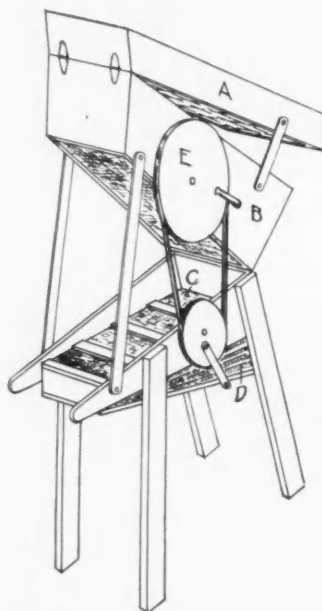
The author inspects banded material just below the Pipes Canyon onyx mine quarry.

How A Bellows-Type Dry Washer Works

Gravel to be concentrated is shovelled onto screen (A), where the coarse material passes off the low end of the screen, and the fines go into the hopper (B). From the low end of the hopper, the sand falls to the riffles (C). Air from the bellows (D) lifts the lighter particles of sand over the riffles and off the low end of the washer, while the heavier particles of gold and black sands remain back of the riffles.

The machine is operated by turning the crank (E) which is replaced with a small gasoline engine on some of the larger washers. The crankshaft is equipped with a cam to vibrate the screen, and a pulley wheel. The wheel transmits power by belt to an eccentric which operates the bellows.

To insure a flat surface and an even distribution of air in the gold recovery section, a riffle unit is built as follows: A well-braced heavy screen is covered with several layers of burlap and overlain by a piece of window screen, which is covered with handkerchief linen above which the riffles are placed from four to six inches apart. The riffles are made of half- to three-quarter-inch half-round moulding with the flat face on the upper side. If amalgamation of the flour gold is desired, pockets holding



quicksilver are placed in front of the riffles. Some flour gold also passes through the handkerchief linen and is caught in the burlap.—Text and drawing courtesy California State Division of Mines

the canyon came a sleek low 1958 station wagon filled with a family of happy rockhounds! They had been to the quarry at the end of the road.

"How's the trail ahead?" Mel asked.

"It sure beats the freeway," answered the driver with a smile.

The campground offers stoves, tables, sanitary facilities, stream water and deep silent solitude. The road to this point is too rugged for house trailers.

James J. Malinowski of 812 N. Ave. 63, Los Angeles 42, is the owner of the Lucky Onyx Mine. He has generously given his permission to rockhounds to collect there providing the larger stones (those weighing 25 pounds or more) are not broken up or removed.

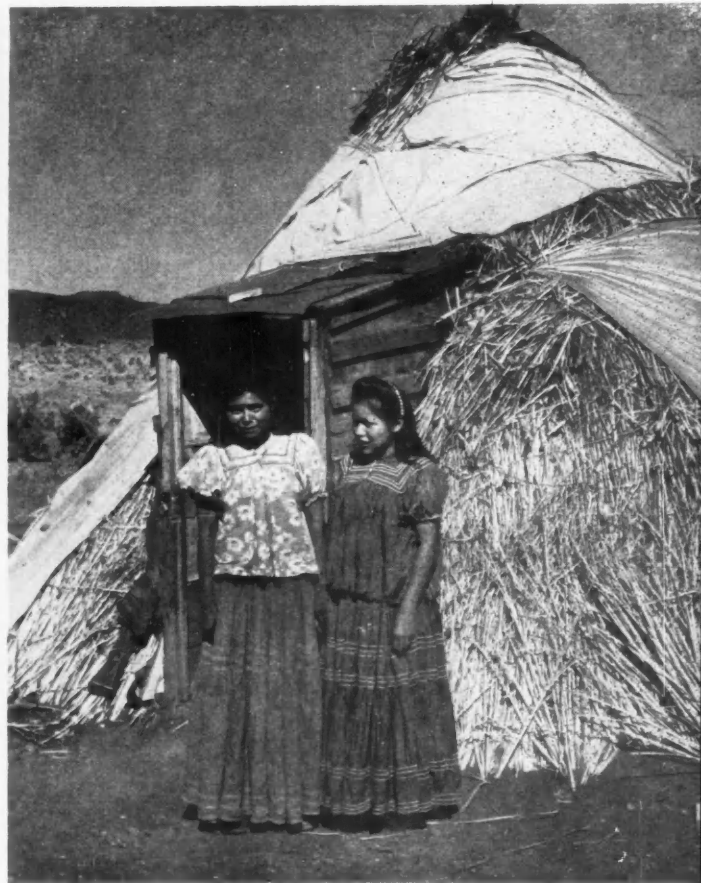
There is much float material in the steep canyon in which the mine is located. Vandals have all but destroyed the several buildings on the property, and only recently the claims have been stripped of all machinery and cable.

The mine, intermittently operated since 1921, is set in wild and rugged country. Elevation at the bottom of the canyon where the loading platform was located is 7280 feet; and over 7900 feet near the top of the quarry.

And so, our trek through portions of the San Bernardino Mountains' desert slopes came to an end. We had only scratched the surface, but what we saw is sure to bring us back many more times in the future.



A little White River matron wears typical tribal dress derived from fashions of the post-Civil War era. The younger set clings to traditional transportation.



School girls of Fort Apache, Arizona. "Apache girls are modest," declared an old timer. "They respect men folk." Pair turned backs until spoken to.

Today the Apache Are Friendly Tribesmen . . .

By JOHN L. BLACKFORD
Photographs by the author

IT WAS JUNE, 1946. As I passed the frowning precipitous escarpment of Arizona's Superstition Mountains, I concluded that a Southwestern picture expedition would not be complete without filming the White Mountain Apache, the once war-like possessors of those rugged summits.

On the map, the broad black line of pavement north from Globe to Carrizo, and the graded track contin-

uing on to Fort Apache, seemed too easy an approach to the Indian Reservation. It would make too casual any acquaintance with the once-famed raiders of the desert hills. An alternate route eastward to San Carlos, then north by desert trail and hill road to Sawmill, Black River and the Fort appeared much more promising.

Bands of the western Apache — never an Indian "nation" — scarcely

Isolated in mountain-guarded reservations, traditionally aloof, steadfast in their determination to maintain the social customs of their ancestors — these are the White Mountain Apaches. A visit to their camps in Southern Arizona is truly a unique experience.

possessed even tribal unity. Yet they held unchallenged the headwater ranges of the Salt and upper Gila. To them belonged all southeastern Arizona and adjacent New Mexico. Now the Chiricahua, Pinaleno, Coyotero, Aravaipa, White Mountain and other groups are gathered on the San Carlos and Fort Apache reserves. Their colorful customs remain much the same; and the smoke drifting lazily up from wickiup fires recalls vividly their once far-scattered ancestral encampments.

It was a dirt road that led north



from the agency settlement at San Carlos. Like the old Indian trails, a score of tracks crossed it. As they departed, wandering off into desert back country, it became uncertain which pair of dusty ruts led to Sawmill. For another hour the car bumped on over stony malpai. Deceptively the ruts turned westward. Perhaps, if they lasted, the scarcely discernible track might get me back to distant pavement. Then the trail dropped to the floor of a mesquite and cottonwood covered wash. After an anxious mile down its dry sandy bed I was among the Apache!

In this remote corner of the reservation I had stumbled upon a campfire, shade, and cattleman Alton Polk. His easy welcome made it seem as if he'd been waiting for a lost and pictureless stranger. His friendly cowhands removed a tall coffee pot from its blackened pole over ironwood coals, and poured a cup for this new arrival. Before climbing into the saddle, Polk deployed them for my camera.

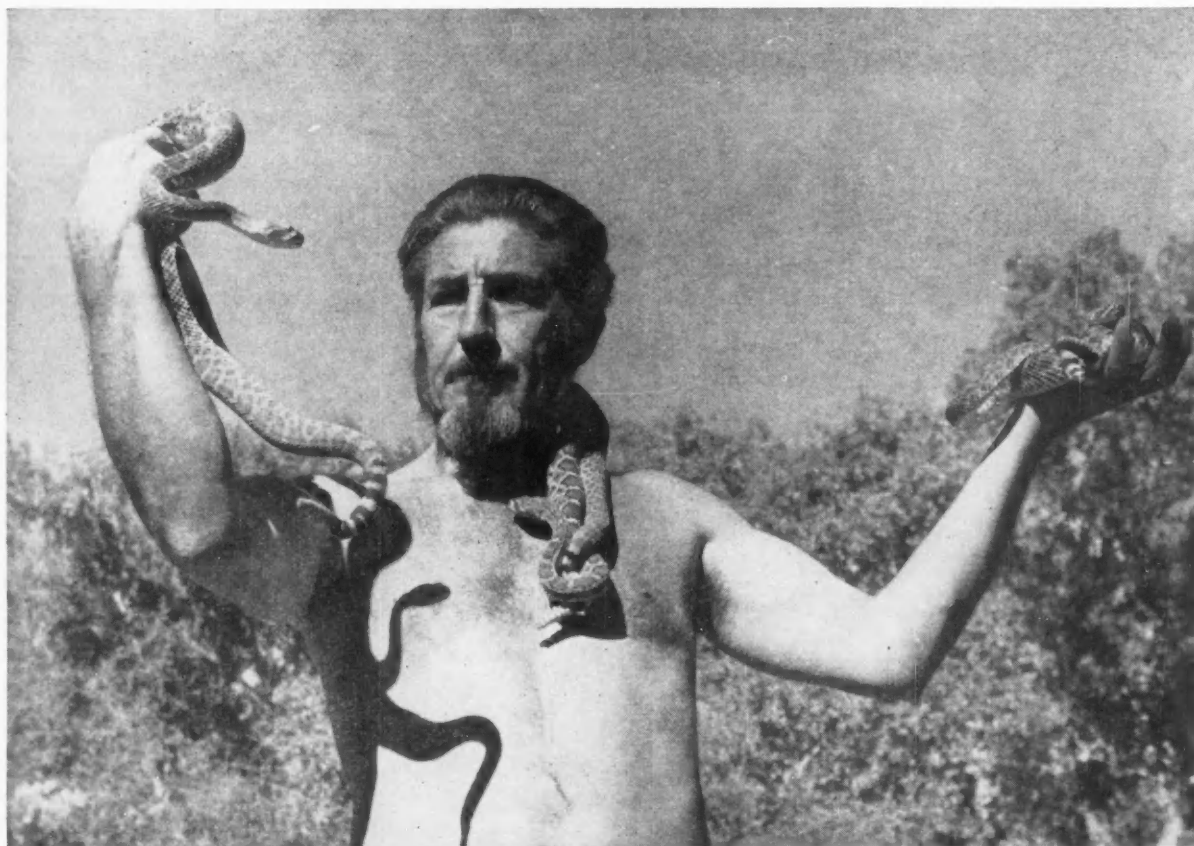
Only cattle trails ventured beyond the campsite. I backtracked, and several hours later returned to the welcomed pavement. Next day it took me quickly north to Fort Apache. There I found the unhurried pattern of Indian living that still lures me.



TOP — Homeward trail from Fort Apache. "They speak the same language we do, only faster," a Navajo girl told author. The little miss on the left proved an excellent interpreter. The well-clad burro appeared also to have profited by Apache manners, but evidently was not trusted—observe hobble marks on forelegs.

CENTER — Cattleman Alton Polk deploys his husky cowhands and well-conditioned remuda for the author who stumbled into this camp on a malpais track near Pigeon Springs on the San Carlos Reservation.

Bottom—Burros are the everpresent burden bearers and women's convenient steeds. A squaw-grass plaited wickiup serves nearly every Apache housing need.



Bill Esenwein and three of the creatures which share Rattlesnake Haven with him.

Snakes Are His Friends . . .

Bill Esenwein is not the first man to search out the mysteries of life by observing the workings of Nature—but he probably is the first to put what he has learned to use by sharing his cabin with rattlesnakes. Like rattlers, Esenwein's sixth sense — the acceptance of all living creatures — is bound to be controversial.

By AMORITA HOOD

ON ONE OF MY desert ventures in the Rich Hill area near Congress Junction, Arizona, I found a mining shack in a rocky cove beneath a sign which read "Rattlesnake Haven." This intrigued me for as a child I had a great love for all living creatures, and felt the crawling ones were unjustifiably resented. I still have a love and sympathy for them.

Sitting in the car, not knowing if I was welcome, I waited. Finally a head popped out of the window and a resonant voice said: "Come in, come in." I accepted the invitation.

Entering his domain, I heard a soft

"whur-r-r." I stopped and listened. The softness of the rattle signified that the snake was small, probably a sidewinder. They are so hard to see that I stood quietly and studied the rocks and ground at my feet. Then I saw a tiny horned head and a lithe form slithering away.

While slowly walking down the hill, avoiding any quick movement, I heard several louder rattles. It is only fright, quick movement, and the animosity that we have for Mr. Snake, which actually causes us to get bitten. Each of these snakes seemed to accept me. Some crawled away. Some never even

raised a head. I was so lost in my thoughts of years gone by—the remembered childhood pity for these creatures—that I had forgotten the man entirely. Then the voice said: "Why are you not afraid of my snakes? They are my watchdogs, you know."

I was shocked back into the reality of the day. My thoughts were drawn to his brown penetrating eyes. Only a human can stand another human's eyes. Animals really don't accept our staring at them. But this man was staring at me as if I had committed a crime.

I had wandered into the "snake estate" of Bill Esenwein (*Desert*, Jan., '58). He told me he had been out of the U.S.A. for 20 years, and for a few seconds I felt a million miles of impenetrable mountains between us. He asked as many questions as he answered because of his everlasting



Crude sign points to Esenwein's cabin.

quest for the Great Truths, as he calls them, of all the out-of-doors and its living things.

"Who are you and why aren't you afraid of my snakes?" he asked in a

voice that had the melody of the Latins.

"I'm supposed to be asking the questions," I answered with a laugh. "I'm here because of my interest in

the out-of-doors and all the living creatures."

Slowly he moved out of the window and joined me in the yard.

Bill recounted how he had come to Arizona because it reminded him of the state of Minas Geraes in Brazil. He had made a trip from Brazil in 1947 on business, and had found the U.S.A. an interesting study because of the many changes which had taken place here during the 20 years he spent in the rain forests and savannahs of Brazil.

Bill had difficulty finding his way around our impenetrable growth. There were changes in architecture, transportation, marketing, women's dress and even in their personalities. He was lost—not as he had been lost in the jungle where being lost was a pleasure—but lost among people who were once his own.

So, when homesickness for the jungles and the crystal cleanness of the savannahs of central Brazil grew unbearable, he chose Arizona as the cure for the insurmountable.

Stanton, a ghost town a mile and a half from Rattlesnake Haven, had provided Bill with the emotional outlet he needed upon first arriving. Nature was reclaiming one of man's abandoned footholds in the wilds, and here Bill could give the world some of the love and understanding he had learned in the jungle. Later, he moved to the old shack in which I had found him.

The typewriter perched upon the old apple box, the piles of manuscripts scattered all over the room — some stuck to the walls with thumbtacks—indicated that he was busy writing something. But what? He sensed my interest and smiled. "You may look if you like," he said.

This is what I found: notes, made over a period of 30 years, of his wanderings—information desirable for many books—keen observations on the differences between our so-called civilized way of life and what we consider the uncivilized ways of the jungle folk of Brazil.

I was so fascinated that it would have taken a bolt of lightning to call me back. Then I felt something tickling my foot (I was barefooted as usual). Without moving, I looked down and there was one of the largest western diamondback rattlesnakes I had ever seen. He was moving quietly and slowly across my foot. The lightning I had needed was there!

The tiny black tongue slid back and forth over my little toe. I was wondering what would come next.

"Stand still!" commanded Bill. I watched the "Professor," as Bill had named the snake, slowly move off of

We Need Desert Photographs . . .

Because it offers so much sunshine and contrasting shadows; so many interesting close-ups and intriguing long-range subjects—the desert is an incomparable photo studio. The pictures you take here can be of even greater value to you if they are regularly submitted for judging in Desert Magazine's monthly contests.

Entries for the September contest must be sent to the Desert Magazine office, Palm Desert, California, and postmarked not later than September 18. Winning prints will appear in the November issue. Pictures which arrive too late for one contest are held over for the next month. First prize is \$10; second prize \$5. For non-winning pictures accepted for publication \$3 each will be paid.

HERE ARE THE RULES

- 1—Prints must be black and white, 5x7 or larger, on glossy paper.
- 2—Each photograph submitted should be fully labeled as to subject, time and place. Also technical data: camera, shutter speed, hour of day, etc.
- 3—PRINTS WILL BE RETURNED WHEN RETURN POSTAGE IS ENCLOSED.
- 4—Entries must be in the Desert Magazine office by the 20th of the contest month.
- 5—Contests are open to both amateur and professional photographers. Desert Magazine requires first publication rights only of prize winning pictures.
- 6—Time and place of photograph are immaterial, except that it must be from the desert Southwest.
- 7—Judges will be selected from Desert's editorial staff, and awards will be made immediately after the close of the contest each month.

Address All Entries to Photo Editor

The Desert Magazine

PALM DESERT, CALIFORNIA

my foot, form a coil, quietly lay his head on his body, and take a nap. Very slowly I backed away from him. He slumbered on.

The rattlesnake man read in my eyes the question uppermost in my mind—how can man and snake live in peace?

"My faith in God, my faith in Nature and my faith in mankind, unite in my sixth sense, sometimes jolted by human elements and the fantastic changes in civilization over the years—changes to which I do not and cannot conform," he answered.

"My faith in God has always been strengthened by the beauty of His unlimited creations, both animal and floral. How can one look from the door of this shack, listening to the shifting breeze, hearing the symphony of harmony into which blends even the dreaded rattle of the reptile, and not believe with a faith so great that one naturally practices the habits of his friends around him—cleanliness of mind and body—and atunes himself to the symphony?"

"I am alone here and the animals and reptiles are few. So I am kind to all that by Nature live here. I accept them without forcing myself upon them, and with a great deal of tolerance on their part they finally accepted me.

"The mice, rats, lizards and snakes slowly moved in, and as I went about my tasks, they heard the tap, tap of the old typewriter and their curiosity got the best of them. They just moved in.

"Now you ask: 'But why?' Because my sixth sense, or acceptance of all living creatures that I learned in the jungle. It is an understanding too great for the average mind because of certain teachings or phobias since birth.

"Arizona has the same living beauty as the most floral places of the world. Truth, fairness and everything needed to make the great greater, the kind kinder, the Christian better and more tolerant, can come from observing daily working and living of His vast out-of-doors. The desert is more magnificent than if the greatest of all artists had painted it. Its beauty of sunset and sunrise is breathtaking. And dusk—the 'quiet time', as we call it in Brazil—is the thankful hour. How can you, or any other person in this beautiful state, refrain from offering a prayer of thankfulness to Him who made it so, when the gentle beauty of dusk turns to evening?"

"Do you understand a little of what I am trying to explain to you? Love, love—a great quiet love for every

living creature—an acceptance of them into our hearts. This is good and clean. It results in a reward of animal faithfulness to mankind—something man could not exist without. It is beautiful and simple if accepted."

The eyes of the rattlesnake man filled with tears. "But how am I to teach or explain to you how Nature—just Nature—fulfills most of our needs and wants?" he went on. "You really need so little for happiness, but you feel the material world is yours to conquer, and you lose the true reason for being here."

At that moment the Professor, with a satisfied "whur-r-r," captured a mouse and his daily bread was provided.

"Do you see what I mean?" asked Bill. "There are so many worth-while things the moderns are missing by not taking just a second or two to enter into the kingdom of our animal and floral world."

"I think I understand," I answered.

I've had many hours of contemplation since then over Bill's depth of expression, and I find that I do understand. It would be beneficial to anyone heavy of heart to have a chat with the rattlesnake man, for he is overflowing with interest and wisdom of what seems to be the unknown to many of us.

Rattlesnake Haven where Esenwein is writing about his jungle and desert experiences and observations.





Cliff Palace, Mesa Verde National Park. Photo National Park Service.

TWILIGHT MUSIC

By CECELIA FOULKES
Mecca, California

In the cool of the desert evening
I sat in a concert hall.
Bound was I not by roof or wall
For the great out-of-doors was my all.

Musicians still playing since dawn
Performing in endless gay song
Each artist his own part was playing
A love song, vibrant, ne'er long.

Doves softly cooing in minor
Reflecting the peace of eve,
A peace sublime and healing,
All cares it did relieve.

A swish overhead ere so fleeting
Revealed in the sunset's glow
A flock of wild geese was flying
To a home where great rivers flow.

Old cottonwood, haven of bird and bee
Rustled faintly accompanying a song,
While the notes of a sad little phoebe
Wafted plaintively to my ear.

Vesper, evening star in the heavens,
Shone bright at the end of day,
A signal, it seemed, to all creatures
For rest and peace for aye.

Mesa Verde

By GRACE BARKER WILSON
Kirtland, New Mexico

The windows of foresaken homes make dark
Mysterious eyes against the cliff.
Within the walls, the emptiness, with stark,
Forgotten tragedies of life, waits stiff
With years, resenting curiosity.
Smoke signs and grotesque markings represent
The final remnants in the history
Of this dead race. The mass abandonment
Of homes that seemed secure from hostile
raids,
Stands unexplained in modern reasoning.
Their restless memory haunts the long pa-
rades
Of visitors, hostile, unslumbering.

OLD TIMERS NEVER DIE

By VIRGIE TIMMONS
Barstow, California

They live again in springtime flowers;
They speak to us in desert showers;
They guard old mines and vanished mills;
They call from color-dappled hills;
They ride the winds so wild and high—
Old Timers never die!

INNER GORGE: GRAND CANYON

By ADELAIDE COKER
Ojai, California

I shall never forget the sound
Of the river's murmurous flow,
As it accompanied us
To the floor of the gorge below.

But more, I shall never forget
The river's color there—
Like a thousand mermaids swimming
With unbound golden hair.

Prayer

By TANYA SOUTH

Oh, Light of Heaven, hear my prayer:
Make mankind care!—
Care for the lonely heart, or bleeding;
Care for all creatures mercy needing;
Care for another. Nothing more
Can so arouse one's highest worth,
Or bring so generous a store
Of heaven for us here on earth.



These adobe walls of old La Paz, photographed in 1910 by George Rice, melted to the ground in 1912 when a record flood from the Colorado River overflowed the site.

Boom Days in Old La Paz...

By AUDREY MAC HUNTER and
RANDALL HENDERSON
Map by Norton Allen

ONE JANUARY day in 1861, Capt. Pauline Weaver, colorful Mountain Man of the mid-1800s, arrived in the little settlement of Yuma on the lower Colorado River and exhibited nuggets of gold found by himself and his companions 70 miles upstream where they had established a camp for their beaver-trapping operations.

The word quickly spread—a gold strike along the Colorado River. Don Jose Redondo heard Weaver's story and at once set out with others to verify the report, and explore the area. Reaching the Weaver camp members of the party spread out with gold pans and what water they could carry to prospect the area. Less than a mile south of Weaver's camp Redondo washed a single pan of gravel that yielded more than two ounces in small particles of gold.

A good showing of color also was found by other members of the party. Since they had not come prepared for extensive operations they returned to La Laguna, a settlement 20 miles upstream from Yuma, to obtain equipment and supplies.

News of their discoveries was carried by stage and freight drivers to San Bernardino and the coast, and in February, 1862, 40 gold-seekers arrived at the new placer strike. The placer field was named La Paz, adobe buildings soon were under construction on the shore of the river which became a port for boats operating between Yuma and the placer field.

Millions in gold nuggets were taken from the gravel at La Paz during its boom days nearly a century ago. Today the site of the old camp is overgrown with mesquite and arrowweed, but the ghost camp may come to life again—as a trading center for the rich farm lands owned by the Indians of the Colorado River reservation.

Discoveries were made almost daily until news spread that every gulch and ravine for 20 miles south and east was rich with gold. Ferra Camp, Campo en Medio, American Camp, Lo Cholllos, La Plomosa, and many smaller places, all had rich diggings. But Ferra Gulch probably was the most valuable of all. News of these discoveries soon spread to Sonora and California and the rush was

on until there were probably 1500 prospecting for the fabulous gold.

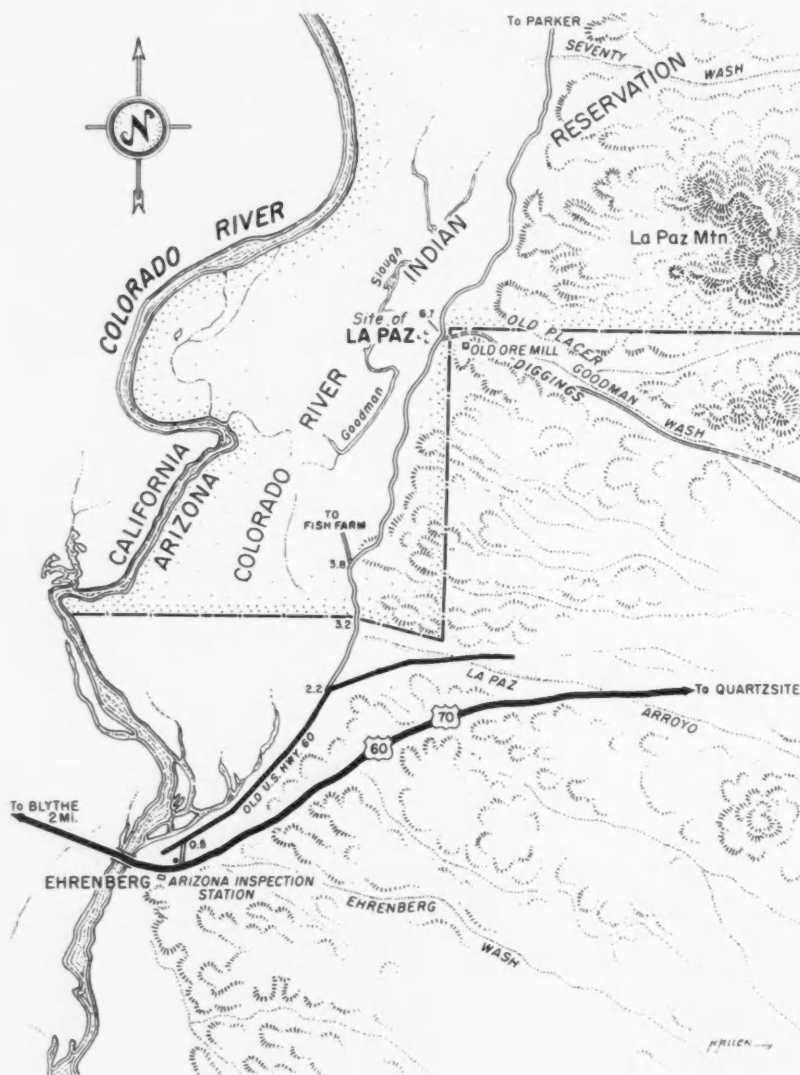
This number remained until Spring of 1864 when the apparent exhaustion of the placers and the extreme high prices charged for provisions caused many to leave. Most of the miners left anyway during the extreme heat of summer. Considering that the standard wages of the country at this time were \$30 to \$65 a month with board, the miners were doing well working the mines. It was often said of that day that "not even a Papago Indian would work for less than \$10 a day."

Regarding the yield of the placers, it was common for a man to take more than \$100 in a single day, and it is said that occasionally the day's work yielded nuggets worth \$1000. Don Juan Ferra took one nugget from his claim which weighed 47 ounces.

Another party found a "chipsa"

Where the old adobe walls of La Paz melted away when the river overflowed in the mining camp site in 1912.





that weighed 27 ounces, and another one of 26 ounces. The contention was that a good many of the larger nuggets were never shown for fear of evil spirits that the superstitious miners felt haunted the mines. The gold was large and generally free of foreign substance. The 47-ounce nugget did not appear to have any quartz or other foreign matter. The gold did vary a little as to its worth at the mint in San Francisco, bringing \$17.50 to \$19.50 per ounce. However that which was sold or taken at the mines went for \$16 to \$17 per ounce. It was estimated that at least \$1 million was taken from these diggings during that first year, and probably as much more was taken out in the following years.

As evidence that the La Paz strikes were rich and money plentiful, prospectors were known to pay as much as

two dollars a gallon for water to drink or to wash gold. This seems incredible that water could be so precious with the oftentimes rampaging Colorado at their doorsteps. But the river water was muddy and men crazed with gold had no time for digging wells.

Now as to La Paz itself. In Spanish, the name means "the peace," probably named so because the gold was supposed to have been found on January 12, the Feast Day of Our Lady of Peace. Yet the town that sprang up as a trading center for the miners was anything but peaceful—few mining towns were, in those days of free money and fevered excitement.

Within a year there were probably 5000 people living in La Paz. As in most early day mining camps, gold was rated higher than human life by the gangs of outlaws who invariably

infest boom towns, preying like vultures upon the riches of the land. There was no scarcity of saloons here although whisky, the chief beverage, was expensive. Freight rates were high; only the most potent liquor seemed worth the price to import. The river boats did a thriving business bringing in supplies from San Francisco by way of Guaymas, and carrying the gold out.

At this time the eastern half of the United States was occupied with the Civil War, but in the mining camps, the men were content to pan gold and ignore the war. Instead of shipping their gold east, they sent it by boat down the gulf to Sinaloa, Mexico, to be milled and sold.

Most of the camps of Arizona Territory—Wickenburg, Signal, Prescott, and others, depended on freighters to bring in supplies from the river landing at La Paz. Until the establishment of a military post at La Paz, the Indians had been waylaying these shipments with a heavy toll of life and supplies. If a supply train was too big to safely annihilate, the Indians would bargain, taking one of the wagons in exchange for safe passage. It was suicide for a freighter to take to the trail alone. The army even tried to out-manuever the Indians by hiring their leaders as scouts or guides, but the plunderings and massacres continued.

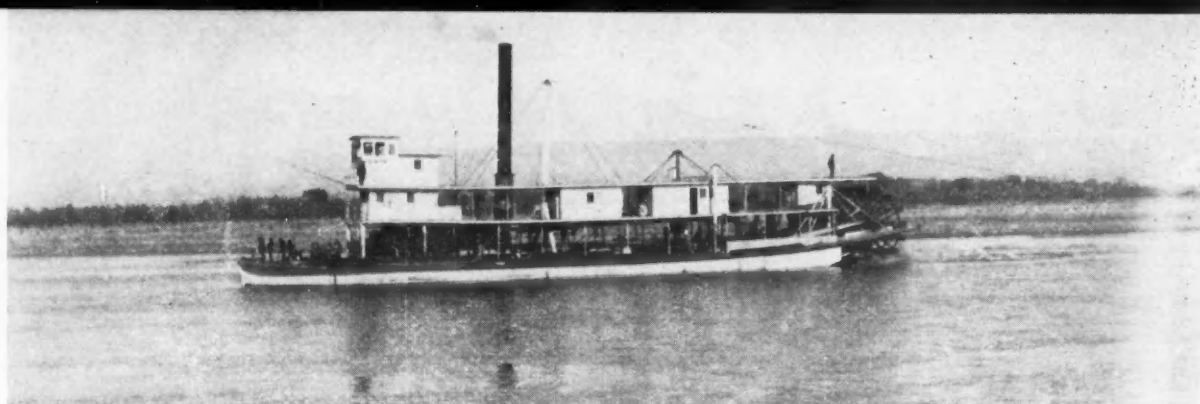
One day the commanding officer at La Paz called in a chieftain of the Mojaves, and asked why the Indians did not settle down and live peaceably. The officer pointed out the advantages of a life of hunting and ease. The chieftain seemed not at all impressed.

"Do not white man like to hunt quail and deer?" he asked.

The officer admitted this to be true. "Indian like to hunt white man," replied the chieftain with finality.

All through the Civil War La Paz was one of the most important towns of the territory. At one time it missed by only one vote of being named the capital city of the Arizona Territorial Government. It was, however, the county seat of Yuma County until 1870 when the citizens of Arizona City (later Yuma) were able to out-vote the citizenry of the mining camp and move the county offices down the river.

Among those who contributed to the history of La Paz and the territory was Captain Polhamus who operated river boats for 40 years on the Colorado. This colorful skipper told of carrying fabulous shipments of gold down the river on his boats. Sometimes as much as \$100,000 in gold dust was cached away in bunk mat-



One of the old steamers which brought supplies up the river to La Paz landing—and took the gold out to mill and mint.

tresses to protect it from the outlaw element who worked the river. Some of those who made history at La Paz lived to cast their lots with Tombstone's lusty existence. Ed Schieffelin is said to have met with his brother, Dick Gard, and O'Gorman here at La Paz to make plans to work the famed silver claim at Tombstone.

Most mining camps live only as long as the minerals are there and a market exists. The life of La Paz was cut short more by the wiles of a river than by the law of supply and demand. In 1870 the Colorado River, in one of her temperamental moods, changed her course and left La Paz stranded two miles away. A river town without a river or a landing cannot long remain a town. Too, when the most promising cropping of gold had been winnowed from the gulches and hills, men began turning their faces toward new horizons. As always where adventurous men gather, there are stories of fabulous strikes waiting for them in the next county or state.

By 1875, when Thomas Blythe had undertaken the reclamation of 40,000 acres in the Palo Verde Valley across the river, the town of La Paz had been abandoned. The adobe walls of the old mining camp were still standing in 1911 when the U.S. Land Office made a survey which established the boundaries of the Colorado River Indian Reservation adjacent to La Paz. However, in June, 1912, when a record flood discharge came down the Colorado River from its Rocky Mountain watershed, the water overflowed the townsite and the adobes melted to the ground. Today the site is so overgrown with mesquite and arrowweeds that it is difficult to identify the exact location of old La Paz.

The crude equipment used by the prospectors of the 1860s did not do a clean job of recovering the placer gold in La Paz, and anyone with a gold pan and sufficient interest may get a showing of color in any of the arroyos which once yielded a fortune in nuggets.

In 1910 a mining man, O. L. Grimsley, sunk numerous test holes in the

gravel and decided that the area could be worked profitably with a dredger type of operation. He formed a company and raised sufficient capital to build a large stone reservoir on a hill overlooking Goodman Wash. His plan was to pump water from the river and bring in a hydraulic dredge. However, Grimsley was killed in an auto accident soon after the reservoir was constructed, and the plan was never carried out.

During the depression days of the early 1930s when millions were unemployed, prospectors who knew about the La Paz placer field returned there with dry washers and many of them recovered enough gold from the gravel to keep themselves in grub. One of these depression prospectors is said to have found a \$900 nugget which had been overlooked by the old-time miners.

More recently a mill has been

erected at the edge of the mesa near the old La Paz townsite, but its operation was discontinued after a few months.

Goodman Wash and the surrounding area is dotted with the cairns of prospectors who have relocated much of the old placer ground, but at the present time there is little activity in the field.

While the gold of old La Paz has been mostly taken out, the Indians on the adjacent lands of the Colorado River Indian Reservation have discovered that their fertile river bottom lands will produce untold wealth in alfalfa and cotton and vegetable crops—and there is the possibility that before many years a location near the lost ghost townsite of La Paz will be selected for a permanent trading center to serve the needs of a rich agricultural industry.



This mill erected in recent years at the mouth of Goodman Wash near the old La Paz townsite is no longer in operation.

The La Paz area is dotted with the monuments of prospectors who in recent years have re-staked claims on the old placer field.





The late Rev. Father John Driscoll and Mr. and Mrs. E. V. Staude. Photo by Ed. Ellinger.

In a magnificent setting of red and cream sandstone cliffs near Sedona, Arizona, stands a Catholic chapel of such unusual architecture as to attract visitors of all religious faiths. The doors of this imposing place of worship, erected through the vision and resources of a California sculptress, are open to all, regardless of creed.

By NELL MURBARGER

EXCEPT FOR the vision and determination of a woman sculptor, Arizona's Chapel of the Holy Cross might never have been

Regardless of Creed

built, and the West would have been the poorer by one great religious shrine.

Situated in the spectacular red rock country fringing Oak Creek Canyon, in Coconino County, this strange place of worship is more impressive than it is beautiful. Its clean, straight lines seem symbolic of peace and inner strength, and I can't believe that any Christian person could look through its high tinted windows to the encir-

cling hills and desert, and not feel a great surging of reverence and a nearness to God and His works.

Immediately below and in front of the chapel lies Little Horse Park, a natural desert valley, green and flower-filled in spring and early summer, and fading to soft beige and brown as the season advances. Towering above the valley, to the south and southwest, stand the red sandstone monoliths of Bell and Courthouse Rocks, and hem-

ming its northern edge is a great sandstone cliff. Lifting nearly sheer to a height of more than 1000 feet, this rock rampart shades from dull red at its base to a light cream color where its rim meets the vivid blue of the desert sky; and on a red sandstone spur, 150 feet up the side of this cliff, stands the gray chapel.

Viewed from the flat below, the chapel is dominated by its cross. Ninety feet in height and 20 feet broad, it spans the entire plate glass front of the building, so that the structure seems to be hung upon it. In a way, of course, that is true—actually, as well as symbolically.

In this mighty cross, the world-wide symbol of Christianity, lies the basic idea of this desert house of worship, the reason it was built, and why it differs, in an architectural sense, from any religious edifice which has preceded it.

Although this Chapel of the Holy

Cross would not come into being until nearly a quarter of a century later, the incident that inspired its ultimate construction occurred in New York City, in 1932, when the Empire State Building had been but recently completed. Marguerite Brunswig Staude, California sculptress who was in New York at that time, was one day contemplating this building when she saw that in a certain light a Christian cross seemed to impose itself through the very heart of the structure. As she studied that optical illusion, she was struck suddenly by a thought, "What an idea for a church!"

For days the idea haunted Mrs. Staude and seemed to insist on taking form, so that finally, using a few bold strokes, she made a rough sketch of such a church. Later, when the California woman showed this sketch to Frank Lloyd Wright, world famous architect, he too was struck by the idea and proceeded to build a model

with articulated cross, the structure being planned to encircle one full city block. This imposing plan was accepted in 1937, but construction of the church on a hill overlooking the Danube, at Budapest, was cut short by the outbreak of World War II.

Although heartsick that the church she had envisioned had fallen a casualty of the war, Mrs. Staude refused to relinquish her dream. Even though it were necessary to settle for a building only a fraction as large as the church planned by Wright—and even though she must personally pay the cost of its construction—she was determined that her unusual idea for a church should be put to use.

Meanwhile, the Oak Creek Canyon country of central Arizona was becoming well known to Mrs. Staude, who had established a summer home on a small ranch a short distance south of Sedona. With an abundance of spectacular sites in the near environs, the

Chapel of the Holy Cross in the red rock country of Oak Creek Canyon in Arizona. Photo by A. J. Randolph.



California woman began prospecting the area for a location suitable to the purpose she had in mind. With help of the architectural firm of Anshen and Allen, Mrs. Staude eventually chose a twin-pinnacled spur as the pedestal upon which to plant the cross of her church.

Since the chosen site was in the public domain its acquisition posed numerous difficulties, but with the aid of Senator Barry Goldwater a deed to the site and permission to build upon it at last came through, and architectural plans were completed in 1954. Submitted to Bishop Bernard T. Espelage, of Gallup, New Mexico, head of the Roman Catholic diocese in charge

crete comprising its walls had hardened, and the wooden frames had been removed, both exterior and interior walls were meticulously sandblasted until every pebble touching upon either face of the wall was left standing in bas-relief and half polished.

Entrance to the chapel is made through a pair of narrow doors, more than four times the height of an average man. Made of bronze-finished aluminum, these doors are fitted with horn handles specially designed to represent the Chalice, and are balanced and hung so perfectly that the pressure of a fingertip is sufficient to open or close them. The altar is of black marble, and the entire front and rear

sculptor Keith Monroe. Thirteen feet in height and disproportionately thin, the Corpus is wrought of black iron worked with an acetylene torch, and depicts The Christ as horribly emaciated and in frightful agony.

Although the inscribed comments of many visitors show definite dislike and even abhorrence of this piece of sculpture, the American Institute of Architects, in 1957, saw fit to recognize the work by rewarding its designer with a special citation for sculpture, at the same time conferred Awards of Honor upon all those responsible for designing and erecting the chapel, including Anshen and Allen, architects; the Bishop of Gallup, owner; William Simpson Construction Company, contractors; Marguerite Staude, donor; and Robert B. Dewell, structural engineer.

Despite its massive appearance, the building is relatively small—its permanent pews being adequate to seat only 50 persons, while folding chairs may be employed to increase the seating capacity to 150. During Sunday services, visitors find it advisable to halt their cars on the wide flat directly below the chapel, from which point it is only a short walk to the chapel. Not only is this short length of road rather narrow and twisting, but the parking area at which it terminates is only large enough to accommodate eight or ten vehicles. From this upper parking area, a curving ramp leads upward to the chapel, and at the lower entrance of this ramp is a small sign warning that cameras may not be used beyond that point. Until I learned the reason for it, this ruling impressed me as rather strange.

According to Frank Murray, custodian of the chapel at the time of my first visit there, in 1957, photographers were originally welcome to make pictures at the chapel; but, as always, there was a small percentage of visitors who abused that privilege. Not only did these inconsiderate persons make flash pictures of the interior when holy services were in progress, but photographers for several advertising companies actually began utilizing the chapel as a spectacular background for filming shorts-clad models who were being used to advertise virtually everything from cigarettes to beer!

"In order to avoid unpleasant encounters and inevitable arguments with this brazen minority, we had to adopt the 'no pictures' rule," said Mr. Murray.

First pastor of the chapel was the Rev. John Driscoll who died in July, 1957, at the age of 36 years. Following Father Driscoll's death, which was



Marguerite Staude arrives with church members for the dedication of the Chapel. Courthouse and Bell Rocks in the background. Photo by Ed. Ellinger.

of the Sedona area, the proposed chapel was officially approved and ground was broken in April, 1955.

One year later the completed chapel was presented by Mrs. Staude to the Roman Catholic Church as a memorial to her parents, the late Lucien and Marguerite Brunswig. Its cost had been approximately a quarter of a million dollars.

As a result of exhaustive forethought and planning, the chapel is well integrated with its setting — even rock cutting having been held to a minimum by shaping the base of the structure to fit the natural conformation of the cliff. On this bedrock foundation stands a steel- and -cement building scarcely less rugged than the mountain to which it clings. After the con-

struction of the building is composed of plate-glass tinted to the shade of smoky quartz. From within the building, this smoke tint reduces the brilliant light of the desert to a soft twilight, while outside the building, that same tinting serves to mirror the surrounding red cliffs and pinnacles.

Dominating the chapel is the cross. Towering 90 feet from the natural rock foundation to the apex of the building, it is the only decorative motif on the entire front of the structure. Within the building, of course, that same massive cross supports the body of the crucified Christ.

Judged by comments in the guest register, no other feature of the chapel is as controversial as this symbolic figure designed by San Francisco

due to a heart condition that had bothered him since his seminary days, the pastorate passed to the Rev. John F. Degnan, who holds Mass at the chapel each Sunday morning and also officiates at Catholic services in the nearby towns of Cottonwood and Clarkdale.

In addition to Sedona Catholics, the chapel draws attendance from Flagstaff, Prescott and even Phoenix, and during all seasons of the year is attended by transient visitors from other states.

Not all these visitors—and not all Sedonans—are agreed that the chapel serves to enhance the beauty of its canyon-side setting. This difference of opinion is quite understandable in view of the fact that the architectural style of the chapel is different from practically anything any viewer has seen previously, and criticism has been the lot of every architectural innovation since the first troglodyte quit his cave dwelling and began construction of a home having four walls and a roof.

In the field of professional designers and builders, however, the plan of the chapel has met with general approval. Of the technical evaluations of the building, one of the most intelligible to a layman is that published in the October, 1956, issue of *The Architectural Record*, of New York City.

"... Beyond the ability of words to describe its achievement, this building can speak to the mind and spirit regarding place and time and purpose," stated *The Record*. "It has the ability to suggest today, both yesterday and tomorrow... a transcendent integration which seems to draw its strength from its location."

"The chapel does not seem bothered by the problem of scale. It does not seem called upon to feign modesty, or to bow to the hills in feeble imitation. Nor does it try for self-assertiveness in the manner of a bantam rooster. It seems rather to appreciate its magnificent setting and react like a well-mannered guest."

I like those excerpts from *The Architectural Record*, and I also like the closing words of a statement made by Marguerite Brunswig Staude. That statement, now beautifully hand-lettered, framed, and hung on one of the interior walls of the chapel, is concluded with this paragraph:

"Though Catholic in faith, as a work of art this chapel has a universal appeal. Its doors will ever be open to one and all, regardless of creed. That the Church may come to life in the soul of men and be a living reality... herein lies the whole message of this chapel."

"He Was a Good Man..."

Herbert Marten was a plain little man, but he had a big heart filled with love for the primitive tribesmen of the Pima reservation a half century ago. Here is the story of a man whose memory is still held in reverence by the people he befriended.

By MARY GEISLER PHILLIPS

THE TRAIN from Phoenix stopped at Sacaton Siding in the middle of the night and my husband and I, the only passengers to alight, stepped off into the blackness of the Gila River Valley desert. As our eyes became accustomed to the faint starlight, we saw the outline of a small shed which was the station, where we were to be picked up at daylight by the mysterious Herbert Marten, whom we had come 2000 miles to see. He would bring a cart drawn by a cow pony to take us to the Pima Indian reservation, where he lived. We sat on our suitcases and waited for daybreak.

Slowly the midnight blue sky was suffused by an eerie opal light which gradually revealed a squat frame building a short distance away. A man, coming out the door with a broom, hailed us.

"Great Caesar's ghost! Where did you drop from? Come in! Come in!" and he hastened to us and picked up both suitcases. "Mollie," he shouted, "we have company for breakfast!"

Before we had time to explain, we were seated at the table with a cup of coffee before us and two interested spectators opposite. When we mentioned that we were to be picked up by Herbert Marten, they looked at each other and put down their cups.

The burly man cleared his throat before speaking, then, taking his pipe from his mouth, he said slowly:

"I'm sorry to tell you, mister, but Marten died a week ago. Buried on Friday." And then his wife, Molly, went on to tell us the strange story of Herbert Marten, who seven years before had appeared out of the blue with a tent and a rucksack, at the door of the Pima Indian agency. He was a miniature man, scarcely five feet tall, mousy hair, blue eyes, school girl complexion, and he spoke with a heavy British accent. He was dressed in British tweeds.

He asked the agent, F. A. Mackery, if he could pitch his tent on the grounds of the reservation. The agent assented but was surprised when he saw Marten putting up his tent near the Indian huts, instead of close to the few houses of the white men beside his office. Marten apparently had some money, and after looking the ground

over, and becoming acquainted with the few white families at the agency and the neighboring Indians, he opened the small store at the Siding.

Our acquaintance with Marten had dated back to the time when my husband, Everett Franklin Phillips, was in the U.S. Department of Agriculture in Washington in the early part of the century. He was amused to receive a letter from Sacaton Siding in Arizona, saying that Marten knew nothing whatever about beekeeping, but he wished to learn all about the subject in order to help the Pima Indians on the reservation where he lived.

Teaching beekeeping by mail seemed rather formidable to my husband, but he was young and enthusiastic and he undertook the job. Letters passed back and forth furiously and Frank became deeply interested in this man, who had the Indians' welfare so much at heart. The letters became more and more friendly, and Frank sometimes brought one home for me to read. This man was witty; and he had a warm heart; he was evidently well educated; and he lapped up information like a vacuum cleaner.

In one letter he told how his interest in beekeeping began. "I often wander in the mountains alone," he said, "and one day I stumbled on bees going in and out of a hole in a tree. I felt sure that hollow tree held plenty of honey, so I hastened back for an axe, and returned with it and with a few Indian friends. We had no way of protecting ourselves from stings, but, enduring them as best we could, we cut down the tree and chopped into the trunk. We were rewarded with five or six gallons of most delicious honey. The Indians had previously been afraid of these white man's flies, but now they begged me to find more bee trees. I told them I would do better than that. I would find out from the U. S. government how to tame them so that they could have their own honey year after year. That's when I began writing to you."

Our kindly host told us Marten sold food and all sorts of household supplies at a very moderate price at his shop, and sold the Indians' mesquite wood, basketry, and pottery for them in Phoenix without commission. Soon the Indians trusted him. They would

drop into his store just to sit silently in friendliness most of the time, fascinated by everything he did. To their astonishment, he learned their language, something no other white with whom they had contact, had bothered to do. Gradually Herbert Marten became their friend and mentor, someone to whom they could come with their troubles. And before the first year was out, Marten was station agent, telephone operator, postmaster, deputy sheriff, and general advisor.

A Pima considered himself well off if he owned two cows. The desert country could not be cultivated without tremendous labor, and there was little other work for Indians unless they made the journey to Phoenix. Most of them led a frustrated, lazy life, depending on the agent for the little they had.

One day Marten saw a cow killed by a train. When the Indian owner came in distress to tell of his loss, Marten said:

"Don't worry. I'll help you make out your claim for damages. Then you can buy another cow."

The Indian shook his head. "No damages for Indian. White man, yes, but Indian, no."

"We'll see," replied Marten cheerfully. "The right of way through the village should be fenced. You are entitled to the money."

A few days after the claim was put in, an indignant representative of the railroad came to Marten's store. He grumbled that if one claim for an Indian's cow was paid, soon all the Indians would be driving their cows on the track and claiming damages.

"No," Marten shook his head. "I will guarantee that will not happen. But so long as the railroad does not fence that right of way through the village, accidents are sure to happen, and an Indian is as entitled to put in a claim as a white man." The claim was paid.

After more cows had been killed and claims paid, one day the railroad official came storming into Marten's store. He shouted:

"If this paying of Indians doesn't stop, somebody's going to get fired!"

"What for?" asked Marten mildly, as he went on weighing out a pound of sugar for a customer.

"Because someone's showing these damned Indians how to make out their claims. I won't stand for it!"

Marten drew himself up to his full four feet, eleven inches. He slammed down the one pound weight in his hand, and stretched his arms their full length along the counter as he leaned forward.

"Why, you pin-headed, knock-

kneed, son of a blister, you! I helped them!"

"You fool, aren't you working for the railroad? That's a fine way to look out for the company's interests! You'll hear from this!" He stamped out, banging the door.

And Marten did hear—he was fired as station agent. When the Indians learned that he had lost that job, their leader went to the U.S. Agent and told him the story. Mr. Mackery sent for Marten and offered him a clerkship in his office.

"We need you here," he said. "Every Indian on this reservation regards you as his special friend. You talk their language. You stand up for their rights. I don't know your history—so far as I know you never receive or send a letter—and I don't want to know your background. But I do know that in the year you've been with us, you've done a lot to help the Pimas. They're more ambitious, more



self-respecting, since you came. You even visit them in their homes, don't you?"

"Of course!" Marten replied. "They are the truest friends I ever had. I'll take the job gladly." So whenever the Superintendent had a new plan to put before the Indians he would explain it all to Marten. Then Marten would go off for a day or two among the Indians and talk to them about it. When he came back he could assure the Superintendent that he could go ahead.

Now, with the help of Indian friends, Marten built himself an adobe house with a porch all around it. He sent away for books and a comfortable bed and chair. He worried over the low living standards among his friends, and finally hit upon chicken-raising as a new means of livelihood for them. He knew nothing about any phase of farming, but he sent to Washington for free government bulletins, and soon he had a few White Leghorn chickens. The Indians also began raising chickens, under his teaching. When he changed to Rhode Island Reds, soon that breed was scratching around the doorsteps of the Indian huts. Whatever Marten learned, they learned from him and copied faithfully.

Besides teaching the Indians how to enlarge their farming interests, and how to become better farmers, Marten taught the girls and boys how to play cricket and baseball. He was always ready for a game with them. Also he encouraged the women to work at their native crafts and the products he sold for them in Phoenix.

Then one day after playing ball, Marten sat in the wind in his sweat-soaked clothes, caught pneumonia, and in three days was dead. On his deathbed, he gave the government agent the name and address of an uncle to notify. When the end came, a telegram was sent asking what disposal the uncle wished made of the body.

Before a reply arrived, a young Indian came to the reservation office, with the request that Marten might be buried in the Indian burial ground outside of Sacaton. The Pimas wished to provide the coffin and have him buried in Indian fashion. The agent told them that if they wanted to draw up a petition asking the uncle for the body, he would forward their request. He thought a few hundred Indians might sign such a petition, but in two days there were more than 1500 signatures and more than enough money to buy the best coffin in Phoenix. Another wire was sent to the uncle and back came the reply, "Glad somebody cared for Herbert Marten. Let the Indians have their way."

To Sacaton, on the day of burial, came hundreds of Indians from all parts of the reservation, and without a sound but the shuffling of moccasined feet, and the clomp, clomp of the cow pony drawing the cart, they moved slowly to the edge of town to the small cemetery. Most of the graves there are mere mounds of earth, but one chief's grave is marked by a surrounding row of white stones, another by a wooden cross. The one grave that stands out among them is made of cement, a flat slab raised into a headstone at one end. On the flat part is lettered crudely as if with a twig, the name "Herbert Marten."

In 1951, my husband and I visited that burial ground in the company of an aged Indian, Kisto Morogo. He touched the headstone reverently with his veined brown hand and his eyes filled with tears.

"He was a good man! He was a good man!"

"Did you know him well?" asked my husband. He nodded.

"I delivered the funeral oration. I was a young man then."

Silently we turned away. On the road back to town, we saw hens scratching around doorways, and silhouetted against the intense blue of the sky was a row of beehives.

Water for Wildlife in an Arid Land

By EDMUND C. JAEGER, D.Sc.
Curator of Plants
Riverside Municipal Museum

EXCEPT FOR A few so-called exotic rivers such as the Colorado, the Nile and the Euphrates which originate in the cool moist mountain highlands and flow long distances across the parched deserts, few streams or freshwater lakes of any importance exist in arid lands. Water for many of the desert's mammals and birds for the most part must be gotten from minor streamlets and waterholes found in connection with seeps and springs whose waters originate far below the earth's surface. Oases, especially in deserts of broad expanse, are often far apart or grouped closely together in widely separated areas.

It has been a recurring wonder to me how quickly and how cleverly some of the desert animals detect even from considerable distances the presence of the sources of water so necessary to their comfort and very existence and how far from their feeding grounds they will travel to get their supplies.

There comes to me now a particularly vivid experience of witnessing water detection that has kept me ever mindful of the uncanny and efficient water-sense which some animals have.

In 1919 Bob Doolittle of Pasadena and I set out with two pack-burros on a long walking journey of exploration through some of the least known parts of the Colorado Desert of California. Since we were for the most part wholly dependent on the waterholes for drink for ourselves and our animals it was largely a trek from one spring to another. As a rule we were able to arrange our itinerary so that when night came we were at some kind of water supply. This was not always easy and several times we found the distances too great to accomplish this. On three occasions we found to our consternation that the springs or wells we had counted on for water had dried up. Then we had to make dry camp and anxiously hope for better water luck the next day, for our animals generally were very thirsty even after one day's long trip over rough country on a warm day.

Why do birds and animals and insects which, like human beings, must have an ample supply of water to survive make their homes in the arid lands where water is so scarce? It is a proper question to ask, and Dr. Jaeger this month gives some of the answers.



The author suggests that Don Coyote may have been the original well-digger. This canny animal senses the presence of water beneath the surface and will dig through two or three feet of top soil to reach it. Photo by G. E. Kirkpatrick.

A particularly trying lap of our trip was between Dos Palmas near the Salton Sea and Corn Springs in the Chuckawalla Mountains. It was at best a full three day's trip with the only drinkable water at Aztec Well on the morning of the third day. I really felt for our faithful beasts when I made our second night's dry camp and could only offer them several small

barrel cacti stripped of their thorns to quench their thirst.

Although the water in Aztec Well was at least 10 feet below ground level those weary thirsty burros actually sensed its presence several hundred feet before we got there. Of a sudden I saw their ears erected; they raised high their noses, opened wide their nostrils and drew several deep breaths.



Natural tanks of Tinajas Altas along the Camino del Diablo in Southern Arizona—a reliable source of water for man and beast since the days when Father Kino first explored this land.

"Water, precious water at last is near," I could almost hear them say. Immediately they broke into a fast walk, then a trot, and finally almost a gallop, perilously endangering the packs of provisions they carried. When

they got to the well site they thrust their noses deep into the opening and it was with greatest difficulty that I was able to hold them away long enough to lower a chain and small pail I had with me, into the well. Each

time I brought up water they, in their eagerness to quench their intense thirst, rudely crowded each other. Finally one or the other won out and thrust its nose so deeply into the narrow pail that it spilled most of the precious water out over the rim. With such bad donkey manners to contend with it took us more than a half hour to bring up enough water to supply their needs.

The tough little burro is naturally a desert adapted animal. With their strong sharp hoofs wild or feral asses will sometimes dig downward in the dry beds of arroyos and washes four or five feet to get at water. It is unfortunate that they are such untidy water users. To quote the geographer, Tom McKnight: "their protracted stays at waterholes commonly result in destruction of most of the surrounding oasis vegetation, deflocculation and packing of the soil, roiling of the water, and heavy pollution of the waterhole by defecation," thus spoiling the chances of other wild life for using the springs.

I am convinced that coyotes have developed a very efficient water detecting sense much like that of the burro. In their wide wanderings across country and up and down the sand and gravel washes they know how to find all the seeps and quite often, especially in dry years, learn to sense in some unusual way where water lies in pockets far beneath the ground surface. They will often dig two or three feet to get water. These coyote holes are familiar enough to those of us who travel the desert wastes. I think we must count wise Don Coyote as one of Nature's first well diggers.

Most of our North American desert dwelling Indians never made any attempt to dig for water; our own Cahuillas who dwelt on the Colorado Desert were among the few exceptions. In their primitive wisdom they made open, inclined dugways to reach down 10 to 15 feet to ground water level. It is quite possible I think, that they got their ideas of well digging from the coyote.

The Paiute and some of the other Great Basin Indians were only able to live successfully on deserts without well digging because at times of urgency and necessity they were great water carriers. When they had to locate their autumn camps for pinyon nut and seed-gathering, for hunting or for arrow-making, even to 10 or 15 miles from water they depended on their patient, hard working women and older children to transport the needed water from far away springs in earthen jars or pitch-coated basket-ware jugs. In rare cases they might take a whole day to go from a temporary camp to

spring and back. Except for cooking and drinking, water needs were few; washing and bathing were seldom considered necessary.

Perhaps in this connection I should mention how in the Kalahari Desert of southwestern Africa the natives are able to make long journeys over desert wastes because they have learned to use ostrich eggs for water storage. These they fill with water in the season of rains and bury them in numbers in the sands beside the trails against times of later use during drouth.

In arid western Madagascar the natives are reported to have used the enormous (sometimes 13 inches long) eggs of the now extinct gigantic ratite bird known to scientists as *Aepyornis*. In the exceedingly thick shelled egg they were able to store several liters of water without fear of evaporation.

The historian, Francisco Clavigero, and the German Jesuit, Father Johann Baegert, both mention how the very primitive Baja California aborigines used as water containers the bladders of the giant turtles (tortugas) of the Gulf. They had in these strange membranous bottles, canteens at once light in weight and, unlike pottery ollas, unbreakable.

When I visit springs in the sun-baked desert I generally find them in almost constant use by many birds, some of which like the doves come far distances to get their daily drinks. One of the best ways for the traveler to find springs is to watch the flight direction of doves at morning or evening time. Since these birds eat large quantities of small dry seeds their water requirements are proportionately high. Converging lines of bees and especially yellow jackets or much used coyote and fox trails are also good clues to the location of water; frequently used burro, the desert-inhabiting burro-deer and cattle trails are often even better ones, especially in summer.

Pinyon and other jays living in semi-desert brushlands, although constant insect eaters especially in the spring and summer, are heavy drinkers at the springs and isolated watering troughs provided by cattlemen for their livestock. The flocks of garrulous pinyon jays generally drink in the morning or evening but the California blue jay while being a day-long frequenter of the bushes bordering water holes drinks only infrequently. At times when he is away foraging, the more timid thrashers and gold finches come in to drink.

In the more solitary open desert places I have observed sleek-bodied ravens, those competent black aviators, ranging widely through the calm to turbid air soaring with marvelous ease



Water indicating *Baccharis sergiloides* in the foreground with pinyon and juniper on the slope beyond. It is almost certain that water will be found where *B. sergiloides* grows. Photo by Stanley Phair.

for hours on end while peering downward toward the heated, often barren earth, hoping by chance to see some small mammal or lizard whose body will furnish him food and drink. Only occasionally do they alight and visit the waterholes and when they do it may be as much to discover new sources of food in the surrounding area as to drink.

The always alert and lively rock wren (*Salpinctes*), as far as I can learn by observation, seldom if ever, drinks. Its small water needs are probably wholly supplied by the juicy-

bodied spiders and insects which it finds while going about its deft explorations in the rock crannies. No place seems to be too dry for this cheerful-singing resourceful feathered sprite of the desolate wastelands.

Reptiles are very successful desert inhabitants because they are never directly dependent on free water. The discreet, placid-tempered vegetarian lizards such as the chuckawallas eat the moist tender shoots, leaves and blossoms of many plants, while the carnivorous and savage kind such as the cannibalistic collared and gridiron-

Corn Springs oasis in the Chuckawalla Mountains of Southern California—once a popular waterhole, but not a reliable source in recent years.



tailed lizards and the snakes depend on insects and other reptiles and sometimes birds and mammals in the case of snakes, to furnish them liquids. But indirectly they are all still very much dependent on water, for if the rains fail so that drouth presses heavily upon the land and the seasonal rhythm is broken, the insect populations and supplies of green-plant food almost immediately decrease, often so much so that many reptiles, vegetarian and carnivorous, inescapably suffer or perhaps even die. It is an imbalance they cannot escape.

In seasons of vegetable plenty the fantastic behaved chuckawallas which often lie about on rocks too hot to touch, and the sluggish egg and insect eating Gila monster lay up surplus food in the form of fat, storing it in their heavy obese tails. When times of lean feeding and dryness ensue they can get not only energy but also the

required water for metabolism by burning (oxidizing) this fat; hence they often survive when other reptiles may perish. The horned lizard of arid western and southern Australia, *Moloch horridus*, has the ability to absorb water through the skin.

On the far west coast of Africa, of Madagascar and of Lower California are narrow but considerable sized areas known as fog deserts—deserts where rainfall is sporadic and meager and where many plants show strange adaptations such as felt-covered leaves and corky-surfaced stems for the absorption of much of the water they need from the fogs which blow in from the adjacent oceans many days of the year. Some of the lichens, those "impossible plants" which occur as short tufted thallose branchlets clinging close to the limbs and branches of shrubs, or as gray-green web-like filaments or lacy fronds dangling as long streamers from the limbs of cerios and large shrubs ready to sway gracefully before every breeze, are particularly successful among the moisture gathering plant creations. They are a familiar and always constant source of wonder to every traveler proceeding along the rough and winding roads of Baja California's Vizcaino Desert.

On our inland deserts there are plants, particularly some of the annual shallow-rooted dainty-stemmed buckwheats (*Eriogonum*) and the amazing, successfully growing bug-plants (*Dicoria*), which come up and actually flourish in loose soils in late May, June and July after most other annuals have died for lack of moisture. It is believed that these drouth resisters must extract not only through their specialized efficient roots but also through the surface of their felt-surfaced stems and leaves imperceptibly small but adequate water from the seemingly moistureless sand and air, particularly the night air whose humidity content is often much greater than we think and which may actually make possible small amounts of dew which becomes available to both plants and small insects.

As I go about on my desert rambles I am always looking for places where I think water may be provoked to come to the surface and furnish drink for my wild animal neighbors, particularly the quail, the doves, the bighorn, the handsome wildcat and the clever coyote. Our good friends, Richard Weaver and Gale Monson, able and conscientious Fish and Wildlife Service men are also constantly on the alert for evidence of underground water which may be brought readily to the surface, and springs whose flow may be augmented. They penetrate

far into mountains built up and worn down through enormous space of time and now almost barren such as the Coxcombs and Palens and Kofas, to build damlets and tunnels and guzzlers to make possible free water for thirsty bighorn and quail and other wildlife whose daily thoughts in summer often turn to quenching thirst.

There are a number of reliable signs to tell these men where water development is possible. One of the best is the presence of water-indicating plants, among the most reliable of which are willows, arrowweed and several species of *Baccharis* of which *Baccharis sergiloides* with green stems and vivid green leaves that almost seem to say aloud "below me is water," is the best. This shrub occurs in well defined clumps from two to three feet high. It is shown in the accompanying illustration which Stanley Phair and I took on a very recent trip to one of the granite-country washes of the far eastern ramparts of the pinyon-covered Sierra Juarez in Baja California. In the sand and gravel wash bottom was growing too a kind of deep green juncus or wire grass which made us know with even more surety that water was here very near the surface, probably within four or five feet at most.

THE *Desert* MAGAZINE CLOSE-UPS

Harold L. Monroe, who wrote "Arizona's Shrine to Bernadette" in this month's magazine, literally received his first "taste" of the desert in his early teens. After trudging with a friend and their burros from their home in Montrose, Colorado, to nearby Red-rock Canyon, and failing to locate the spring they had been told was midway down the gorge, they backtracked to where they had seen a muddy irrigation ditch. "It was the best tasting semiliquid I have ever drunk," declares Monroe.

He served with the Navy during World War I and in the years following on a number of merchant ships, before returning to the desert. Monroe now lives at Lomita, California, and spends many weeks out of each year traveling desert trails. His work has appeared in many magazines.

* * *

Aida Mumford Calhoun, author of "Fiesta Time in Santa Fe," lives in Amarillo, Texas, where her heart is "torn between the West, which I love, and the Deep South where I was born and raised."

To resolve this inner struggle, she has written extensively about both areas for newspapers and magazines. Her writing includes the historical novel, *The Witch of Bayou Pierre*, set in her native Louisiana. Another book, a collection of short stories, is being prepared for publication.

SUMMER WATER CRISES HIT DESERT COMMUNITIES

Hot weather played its usual havoc on local water supplies, but this summer the emergencies seemed especially acute.

From the Rand Mining District on California's Mojave Desert came word that residents were being rationed to two hours of water service daily. The water is turned on from 4 to 6 p.m. only. Tank trucks from the U.S. Naval Ordnance Test Station at China Lake rushed water to the district when pumps failed.

Southward in the fast-growing Antelope Valley the inability of a Waterworks District in Lancaster to supply enough water—some 250,000 gallons a day—forced the shut down of the Antelope Valley Turkey Growers Association processing plant. The water, officials said, is enough to supply about 600 persons at the high summer rate of use—estimated at 400 gallons a day per person. The high rate was attributed to heavy lawn watering, cooling systems and excessive "water waste practiced by Lancaster citizens."

Emergency water schedules were made even more restrictive in Moab, Utah. The ordinance eliminates all car washing and the watering of new lawns planted since March 15.

Here and There on the Desert . . .

ARIZONA

Two Big Dams Proposed . . .

PHOENIX — Federal authority is being sought by the state of Arizona to construct two power dams on the Colorado River in the Grand Canyon area. Estimated cost of the project is \$290,000,000. In announcing the project, the Arizona Power Authority said it must convince the Federal Power Commission that Arizona should take precedence over the city of Los Angeles, which wants to build on one of the dam sites, and also must obtain the necessary construction license. The Arizona Agency proposes to build dams at Bridge Canyon, north of Seligman (\$162,000,000—440,000 kilowatt capacity); and Marble Canyon north of Flagstaff (\$128,000,000—340,000 kilowatts). Construction would be financed by revenue bonds.

• • •

Small Tract Project Studied . . .

KINGMAN—Consideration of public lands in western Mohave County for possible classification and orderly disposal under the Small Tract Act or other laws was announced by the Bureau of Land Management. The lands, along or near the Colorado River, will not be open to small tract applications while necessary surveys and examinations are underway, and all applications received will be returned to the applicants. Applications already on file will be acted on as soon as possible. The Bureau's action was prompted by recently increased interest in these lands. Experience in other areas has demonstrated the desirability of planning small tract development in advance of filing, Bureau officials said. — *Barstow Printer-Review*

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Ehrenberg Again Has Postoffice . . .

EHRENBERG — The Colorado River community of Ehrenberg has regained its postoffice. The town had one of the first postoffices in Arizona, established in 1871, but lost it in 1908 when receipts dropped. Lately, however, the development of ranches, tourist trade and farming prompted residents to ask for re-establishment of the postoffice. They had been receiving mail at Blythe, just across the river.—*Phoenix Gazette*

• • •

Jerome State Monument Proposed

JEROME—The Ghost "City" of Jerome is under consideration as a state monument following informal talks participated in by the State Parks Board and the executive council of the Jerome Historical Society. The mining community is one of the youngest ghost towns in the West.—*Verde Independent*

Plaque Honors Theodore Roosevelt

NORTH KAIBAB NATIONAL FOREST — The role of Theodore Roosevelt as a conservationist, and his great interest in the out-of-doors was recognized at the recent dedication of a bronze plaque in North Kaibab National Forest. The plaque is mounted in a huge boulder near Jacob Lake. The North Kaibab Forest, famous throughout the world as the home of the finest deer herd in the country, was set aside as a game preserve by Roosevelt in 1906.—*Phoenix Gazette*

• • •

CALIFORNIA

Navy Seeks 180,000 Acres . . .

BARSTOW—The Navy is attempting to acquire an additional 180,000 acres of land for its Naval Ordnance Test Station with headquarters at China Lake. Two areas are involved: Mojave Gunnery Range-B (which has been largely leased land) and additional acquisitions which would extend the range south to within a few miles of Barstow. The extension would split

Hard Rock Shorty of Death Valley



The stranger steered his cloud of dust up to the Inferno store, halted, and emerged in quest of supplies and tourist information. Echo Canyon was next on his list, and he needed directions and mileage.

Hard Rock Shorty, bringing the front legs of his chair down to the floor, took charge of the tourist and his questions.

"I reckon yuh mean jist the common Echo canyon," he began. "Nobody but a prospector an' a mountain goat could get up to my special one, the gran'daddy o' all echo canyons."

Hard Rock paused to test the stranger's reaction, and finding it one of respectful attention, continued his story.

"This here Echo canyon that the tourist takes in is purty good, but if yer lookin' fer conversation, yuh'll be disappointed.

"Now you take this echoin' place o' mine over the other side o' Telescope. They's a gulch over there jist full o' echoes. Me an' them echoes used to sass each other back an' forth—never no

hard feelin's though. But I never seen nothin' remarkable about 'em till one day after I'd cussed out my ol' burro better'n usual. That wuz in the mornin' jist afore startin' up the gulch to the claim.

"I'm a durned wart hog, if about four hours later I didn't hear that same cussin' word fer word. Even that poor ol' burro noticed it an' give me a mean look.

"Wal it didn't take me no time to figger it out. That there cussin' wuz nothin' but a echo of my mornin' work-out—sort of a delayed action job. An' you can bet that four-hour echo was a big help to me. Ever after I'd jist holler 'Quittin' time,' in the mornin' afore I started out to work, an' faithful as a houn' dog, that echo would report about noon by hollerin' back, 'Quittin' time.'

"I always wanted to reward its faithful services in savin' me from workin' overtime too much, but I ain't figgered out yet what kind of a present yuh can give a echo."

THE DESERT TRADING POST

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the proposed Black Canyon State Park. Black Mountain, Opal Mountain and Inscription Canyon, regarded as among the most important areas for the study of prehistoric man on the Mojave Desert, are included in the annex.—*Barstow Printer-Review*

• • •

Oppose New Joshua Road . . .

TWENTYNINE PALMS — When E. T. Scoyan, assistant director of the National Park Service, held a hearing in June to hear the petitions of groups seeking a new south entrance road into Joshua Tree National Monument, the petitioners were far outnumbered by conservation organizations and individuals opposing the plan. According to Monument Superintendent Elmer Fladmark, 74 letters of protest had been received by his office compared with 17 favoring the road. Since the date of the hearing in June, Fladmark said many additional letters had been received, being in about the same proportion as 74 to 17. The National Park Service has indicated that it is opposed to the opening of additional roads through the Monument and conservation groups generally are supporting this policy.

• • •

State Promises Sandblast Action . . .

THOUSAND PALMS—The State Highway Commission informally agreed to spend additional funds for work along the sand-plagued stretch of U.S. Highway 60-70-99 from Garnet to Thousand Palms. High winds along this road many times drive sand at speeds sufficient to strip paint and pit windshields of passing cars. Insurance companies in the area have estimated the annual damage to autos at approximately \$4,000,000. — *Desert Sentinel*

NEVADA

Desert Reforestation Advocated . . .

RENO—A small patch of pines at the new State Tree Nursery near Reno holds significant importance for the forestry future of Nevada, according to State Forester George Zappettini. He estimates there are 25,000 to 30,000 acres of barren land in Western Nevada which would support forest crops if planted to trees. "We're counting on those seedlings to give us native planting stock to begin the job," Zappettini said. The tiny trees are Jeffrey pines, nurtured from seed gathered from trees native to the Sierra slopes of Nevada.—*Carson Nevada Appeal*

Ichthyosaur Expert Quits . . .

IONE—Dr. Charles Camp (*Desert*, December, '55), prominent University of California paleontologist, recently announced he was severing his connections with the Nevada State Park Commission. The action follows a long series of differences with Thomas W. Miller, chairman of the Park Commission. Dr. Camp has been instrumental in the development of the important Nevada Ichthyosaur Park in Nye County near Ione where he has been working for several years on uncovering the bones of the prehistoric creatures.—*Nevada State Journal*

Sheldon Antelope Count Begun . . .

SHELDON ANTELOPE REFUGE—An antelope productivity survey is being conducted in the Sheldon Antelope Refuge. Such surveys have been carried on since 1950, and their purpose is to determine the production of young from year to year. Last year's production—90 kids per every 100 does—was twice as high as counts in 1955 and 1956, and the highest since the counts were begun. Another high count is expected this year because of the favorable range condition.—*Nevada State Journal*

Indian Chukars Under Study . . .

CARSON CITY—Glenn Christensen, a Nevada chukar partridge authority, will make a trip to India to capture rare birds suitable for hunting in Nevada. The expedition is part of a new program sponsored by the U.S. Fish and Wildlife Service. Nevada was the first state to take advantage of it, and local game authorities hope the chukars will fill hunting gaps in the state where native birds are scarce.—*Carson Nevada Appeal*

NEW MEXICO

Gallup Seeks Water Source . . .

GALLUP—Surveys made of Gallup's existing water supply during the past two years indicate that present

sources will not be adequate to keep up with the present rate of population increase. City officials said existing well fields could not produce enough water to support any significant in-

dustrial activity in Gallup. They hope to supplement the community's existing supplies with water from the Navajo Dam Project, described by them as the "only available source."

Desert Quiz

At one time or another, the answers to all the questions in this Quiz have appeared in *Desert Magazine*. They cover a wide range of subjects—history, geography, botany, mineralogy and the general lore of the desert. Twelve to 16 is a fair score, 16 to 18 is excellent. A score better than 18 is exceptional. The answers are on page 40.

- 1—The Southwestern state where the major atomic test blasts have been made in recent years is—Utah . . . Nevada . . . Arizona . . . California . . .
- 2—Billy the Kid was a notorious outlaw in—California . . . Nevada . . . New Mexico . . . Arizona . . .
- 3—The tribal taboo against a young man looking at his mother-in-law is observed by the — Yaqui Indians . . . Yuma . . . Hualpai . . . Navajo . . .
- 4—Screwbean is a common name identifying certain species of—Mesquite tree . . . Juniper . . . Yucca . . . Ironwood . . .
- 5—Galleta is a desert—Flowering vine . . . Grass . . . Cactus . . . Parasite . . .
- 6—Crystals known as Iceland Spar are — Calcite . . . Quartz . . . Iron . . . Manganese . . .
- 7—The name Dellenbaugh is associated with—The capture of Geronimo . . . Discovery of gold at Virginia City . . . Navigation of the Colorado River . . . Operation of the Pony Express . . .
- 8—If an old desert rat on a midsummer prospecting trip ran short of water, the member of the cactus family he would most likely seek to quench his thirst is—Bisnaga . . . Cholla . . . Beavertail . . . Buckhorn . . .
- 9—Banded Gecko is the species name of a desert—Bird . . . Snake . . . Fish . . . Lizard . . .
- 10—Canyon de Chelly is located in the reservation of the — Pima Indians . . . Navajo . . . Apache . . . Papago . . .
- 11—If you wanted to climb Mt. Timpanogos you would go to the state of — New Mexico . . . Arizona . . . Utah . . . Nevada . . .
- 12—The reservoir from which the Salt River Valley of Arizona receives its main water supply is behind — Coolidge dam . . . Roosevelt dam . . . Hoover dam . . . Elephant Butte dam . . .
- 13—Zabriskie Point is a well known lookout for travelers overlooking—Death Valley . . . Grand Canyon . . . Painted Desert . . . Bryce Canyon . . .
- 14—Leader of the Mormon Battalion which crossed the continent in support of Kearny's Army of the West was—Jacob Hamblin . . . General Crook . . . Kit Carson . . . Capt. Cooke . . .
- 15—The desert shrub commonly known as Brittle-Bush is—Mallow . . . Desert Holly . . . Creosote . . . Encelia . . .
- 16—Among the Navajo, they refer to themselves as — The Ancient Ones . . . Dwellers in hogans . . . Dine', meaning The People . . . The Great Hunters . . .
- 17—Prehistoric Indians used a Wickiup as a—Weapon of warfare . . . Shelter from the elements . . . Basket for storing food . . . A ceremonial garment . . .
- 18—The man generally credited with the discovery of silver at Tombstone was—Pauline Weaver . . . Wyatt Earp . . . Ed. Schieffelin . . . Henry Wickenburg . . .
- 19—Motorists on Highway 66 near Holbrook, Arizona, would cross the—San Juan River . . . Little Colorado . . . Gila . . . San Pedro . . .
- 20—The Lost Dutchman gold mine, according to legend, was in the Cargo Muchacho Mountains . . . Funeral Mountains . . . Superstition Mountains . . . Harqua Hala Mountains . . .

DeVargas Statue Planned . . .

SANTA FE—Caballeros DeVargas announced plans to commission a statue of Captain-General Diego DeVargas to stand in the Santa Fe plaza he liberated from rebellious Indians 266 years ago. Official unveiling and dedication of the statue has been set for 1960 as part of the 350th anniversary of the founding of Santa Fe. —*New Mexican*



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THE *Desert* MAGAZINE
PALM DESERT, CALIFORNIA

Navajo Dam Contract Awarded . . .

NAVAJO DAM—The Department of Interior authorized award of a \$22,-822,624 Bureau of Reclamation contract for construction of Navajo Dam on the San Juan River in north central New Mexico. Navajo will be the third largest dam on the Colorado Storage Project. Glen Canyon Dam on the Colorado in Arizona and the Flaming Gorge Dam on the Green River in Utah are larger. Low bidder on the Navajo project was a joint venture of Morrison-Knudsen Co., Inc., Henry J. Kaiser, and the F. & S. Contracting Co. The contractor will be headquartered in Los Angeles. Working time for the project was set at four and a half years. —*Southern Utah News*

Citizens Topple Billboards . . .

SANTA FE—The "Santa Fe Committee for Signboards" took credit for cutting down seven big billboards between Tesuque and Pojoaque. The Committee said it would tear them down again if they were replaced along scenic highways. The Committee charged that the signboard interests were "blind and uncaredful to the ultimate harm being done to this state which profits so largely from its natural beauty." —*New Mexican*

Rio Grande Dams Proposed . . .

ALBUQUERQUE — Army Engineers have proposed construction of two new dams as part of the modified Middle Rio Grande Flood Control project. The dams—the Galisteo and Cochita—together with a channel program, should provide the highest protection at the lowest cost, the Army said. —*New Mexican*

Heart Death Rate Lowest . . .

SANTA FE—Although heart disease is New Mexico's No. 1 killer, the state's death rate from the disease is still the lowest in the nation. Heart deaths in the state totaled 172.8 per 100,000 population compared with a 165.8 rate for the previous year. National average was over 360.0 deaths per 100,000. —*Las Cruces Citizen*

UTAH

New Product from Quaking Aspen

MIDVALE—A former "weed tree" has been turned into a valuable resource by the Welch Planing Mill in Midvale. The quaking aspen is too small a tree to make much of a board, and it is much too soft a hardwood, but, the Midvale firm is making glued-up core stock from aspen for use in high-quality panels and doors. Development of a market for aspen adds millions of feet of timber to the state's forest-producing potential, company officials said. Welch has also placed on the market a garden mulch made from aspen. —*Gunnison Valley News*

Flaming Gorge Dam Job Awarded

DUTCH JOHN—The Interior Department awarded the prime contract for construction of the Flaming Gorge Dam (*Desert*, January, '58) to the Arch Dam Constructors, whose low bid was \$29,602,497. The firm is a joint venture, composed of Peter Kiewit Sons of Omaha, Morrison-Knudsen Co. of Boise, Mid-Valley Utilities Co. of Texas, and the Coker Construction Co. of Omaha. The low bid was approximately 12 percent above the Federal engineers' estimate of \$25,-889,667. The contract calls for completion in five years of the Green River dam in Utah near the Wyoming border. —*Salt Lake Tribune*

Court Reopens Indian Suit . . .

SALT LAKE CITY — The 10th U.S. Circuit Court of Appeals in Denver ordered the reopening of a case in which 29 Navajo Indians in southern Utah were awarded \$186,017 for loss of their ponies and burros. The animals were shot by Bureau of Land Management personnel for repeatedly grazing on government land without permission. The District Court judge who made the award had become "incensed and embittered, perhaps understandably so" by the general treatment of Indians in southeast Utah by government workers and ranchers trying to force them back on the reservation, ruled the higher court in its decision for retrial. —*Salt Lake Tribune*

Glen Canyon Recreation . . .

KANAB—The National Park Service and the Bureau of Reclamation have reached agreement regarding the administration and development of the recreational facilities in the Glen Canyon Dam area. "When Glen Canyon Dam and reservoir are completed the area will be designated the Glen Canyon National Recreation Area," Interior Secretary Seaton said. "As such, it will be administered by the National Parks Service in the same manner as the Lake Mead National Recreation Area." . . .

Dinosaur Monument Work Slated

VERNAL — The National Park Service plans to spend \$606,400 in Dinosaur National Monument during the current fiscal year, the bulk of the money going for roads and trails. Other expenditures will be for campsites, relieving of fossils, employee housing and site improvement. Meanwhile, increased activity by conservationists to secure National Park status for Dinosaur has been noted, with most Utah state and congressional leaders still opposed to such a move. Conservationists feel that they would be in a better position to block the controversial Echo Park Dam if Dinosaur was elevated to Park status.

MINES and MINING

Washington, D. C. . . .

The United States is not liable for damages of 252 gold mining companies it temporarily put out of business during World War II. This was the decision reached by the Supreme Court in reversing a Court of Claims 1956 finding in favor of six companies. About 150 more cases had been pending before the lower court awaiting the High Court's ruling. The Justice Department had estimated the government's total liability would have been about \$50,000,000. The companies contended the War Production Board's action in 1942 of ordering a gold mining shutdown in order to channel miners into more essential war jobs, was a taking of private property without just compensation in violation of the Fifth Amendment to the Constitution. The Justice Department argued there was no positive invasion of the property or use of it by the United States, since the owners always retained title and possession.—*Nevada Appeal*

Mill City, Nevada . . .

Groundbreaking for northern Nevada's first cement plant, which is expected to be in full operation employing 65 workers by June of 1959, took place recently. The Nevada Cement Corporation said it would construct 15 to 20 houses for plant workers. The plant, once completed, will be the only one of its kind between Sacramento and Salt Lake City. Once in operation it will be capable of producing a half million barrels of cement annually, but the facility will be set up in such a way so that capacity can be doubled if business warrants such outputs.—*Nevada State Journal*

Grand Junction, Colorado . . .

The government can't buy more uranium than it needs. This is the AEC policy statement made by Director of Raw Materials Jesse Johnson. The AEC is limited in the amount of concentrate it can purchase by military and experimental requirements, he said. The AEC, Johnson pointed out, does not set those requirements. After 1962, the price of concentrate will be \$8 per pound—or less, he said. The figure is a firm one, subject to contract terms. However, Johnson warned the AEC at least will not pay over that amount for concentrate.—*Moab Times-Independent*

San Juan County, New Mexico . . .

The Navajo Tribal Council has announced intention of seeking bonus bids during December, 1958, and January, 1959, on 200,000 acres of prospective oil and gas leases in extreme northeastern San Juan County, New Mexico. Paul Jones, council chairman, said a formal announcement of conditions of the sale would be made this fall. The area is in the San Juan Basin, extending east from the Arizona state line. "Interest in the area has been high, with several companies making requests for lease sales," Jones said.—*Salt Lake Tribune*

Ensenada, Baja California . . .

A giant new cement factory, destined to give a large boost to Baja California's economy, was completed at Ensenada this summer. Officials of the Cementos de California, S.A., plant say it will have great enough capacity to furnish not only all Baja California with a plentiful supply of cement, but much of the region to the northeast as well.—*Calexico Chronicle*

Tungsten, Nevada . . .

The last of Nevada's tungsten operations closed down this summer. The Nevada - Massachusetts Company's Pershing County tungsten mine suspended work "for an indefinite period" because of continued low demand for tungsten, a price below \$20 a unit for the concentrate, failure of the government to support the industry, and widespread importations from abroad. Nevada - Massachusetts is the oldest tungsten producer in the nation. About 70 men lost their jobs because of the closing. At peak production the mine employed 274 men. As recently as 1956, there were 139 tungsten producing properties in Nevada.



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Tonopah, Nevada . . .

Desert Mines has signed a contract calling for the sale and processing of 2,500,000 tons of gold and silver tailings which the company owns at Milers, about 15 miles south of Tonopah. The contract is with the Thunder Bird Mining Development Corporation of Denver, which announced plans for construction of a \$1,000,000 treatment plant capable of handling 1500 tons of ore daily. A payroll of 135 men was predicted.—*Humboldt Star*

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Carson City, Nevada . . .

Large reserves of iron ore have been determined in seven counties of Nevada as the result of field study conducted by the State Bureau of Mines of the University of Nevada. A new publication, "Bulletin 53, Part B, Iron Ore Deposits of Western Nevada," tells about the reserves at some 20 mines and prospects examined in Ormsby, Douglas, Storey, Lyon, Mineral and parts of Nye and Esmeralda counties. Copies of the report may be obtained from the Nevada Bureau of Mines, University of Nevada, Reno, for \$1.50 plus 10 cents for postage.—*Reese River Reveille*

Grants, New Mexico . . .

Phillips Petroleum Company's new uranium mill in the rich Ambrosio Lake district has begun processing ore. When operating at capacity, the mill is expected to handle 1725 tons of uranium ore per day. The mill is located 25 miles north of Grants in the Ambrosio Lake area where the

company, in 1956, made one of the major uranium discoveries in the U.S. on a wholly owned 1280-acre mining lease. Drilling has already outlined over 5,000,000 tons of uranium ore on the property.—*Grants Beacon*

Ripley, California . . .

Western Mines Manganese Cindering Plant, located at the end of the Santa Fe rail lines in Ripley, opened for operation. The plant is scheduled to run 24 hours a day, and will employ about seven men. Concentrated ore from the firm's Cibola Mill will be trucked to the Ripley plant for cindering into coke. This process raises the manganese content of the ore as much as 12 percent. Western Mines employs about 75 men at its mining operation at Cibola.—*Palo Verde Valley Times*

Washington, D. C. . . .

The government's domestic manganese purchase program is expected to terminate sometime in or about the fourth quarter of calendar year 1959, instead of January 1, 1961. The earlier termination was predicted by the Arizona Department of Mineral Resources, based on information supplied by an official of the General Services Administration. Continued deliveries at present accelerated rates are expected to supply the program's quota of 28,000,000 ton units of manganese by late 1959. — *Wickenburg Sun*

Washington, D. C. . . .

Recently retired Atomic Energy Commission Chairman Lewis L. Strauss predicted a "long run for uranium" despite research efforts to harness hydrogen power. Strauss said uranium fission power will still be in demand even if hydrogen fusion energy is someday put to work. A hydrogen power plant, if one is made, will be "of very great size and very great cost. We will be using fission for local production of power even after we get thermonuclear (fusion) power," he said.—*Humboldt Star*

Salt Lake City . . .

Utah has become the 10th largest oil producing state in the Union, pouring out 131,324 barrels of crude daily. Utah, which saw its first sustained commercial discovery of oil at Ashley Creek, Uintah County, in September, 1948, has now passed up such older producing areas as Arkansas, Mississippi, Montana, Nebraska, Indiana, Michigan and North and South Dakota combined. Utah's current production rate is 47,933,620 barrels annually—contrasted to a total production during 1957 of only 4,367,587 barrels. — *Salt Lake Tribune*

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AMATEUR GEM CUTTER

By Dr. H. C. DAKE, Editor of The Mineralogist

Australian opal appears in a wide variety of types including matrix opal, the so-called black opal which shows small patches of rich violet and red fire hues; occurring in boulders ranging from small sizes up to two pounds or more in weight. These boulders resemble iron-stone nodules, the fresh appearing ones selected for splitting, as the lighter-colored more weathered masses are likely to break into fragments and fracture the precious material within. The violet and red fiery hues of color against the coppery-colored matrix makes an effective and popular material for cutting to beads and other ornaments, and in London at the present time this material is quite popular. The material is also used for cutting into various designs which are not "carved" out, but inscribed on a flat face.

Opal, in hands, is fairly plentiful, the good quality material being quite attractive, the colors ranging from white and yellow to pale and dark mauve. The bands are seldom more than one-quarter to one-half inch in thickness, although when viewing an especially fine specimen the depth appears much greater. This type of opal is highly popular for hand specimens.

Opal found in nodules and cavities often includes that of the best gem cutting quality. The very fine six inch or larger spherical nodules show circular patches of fire protruding through to the outer surface of the nodule. These, when broken or cut in half, will show many fantastic and interesting designs which the imagination may easily depict as representing various animals, scenes, fossils and other shapes. Often these nodules carry two different bands of opal adjoining, one of common opal, the other a deep bluish color, so-called black opal.

Australian opal comes from three generally described localities. In Queensland the mines are small scattered workings, often separated by hundreds of miles and remote from civilization. Rain is very scarce in this drab arid desert region. No names can be properly assigned to these workings which have produced some of the world's finest specimens of gem opal. The writer had one wonderful mass of the so-called "pin-fire" opal with each flashing area of the same uniform size, and the brilliant mass of color entirely the same over the whole specimen. Probably no specimen like this had ever appeared in the London market. From this small piece two stones were cut, one of five carats and one of four carats. The magnificent green, red and yellow fire in these gems defies description.

Thirty years ago Lightning Ridge locality was the source of many fine specimens, and while the area is still worked, the best material appears to be practically exhausted.

The more recently discovered locality is the Coober Pedy area in the Stewart Range. The opal found here is usually fine colored with broad patches of boldly flashing fire, occurring over large but thin surfaces. Some of this opal, after being cut out of the mine for some weeks, "crazes" like tiles near a fireplace and these numerous minute fractures make it worth but little for gem cutting.

Some of the Australian opal fields yield opalized freshwater and marine shells ranging from one-half inch to four inches in

size, often completely filled with first class fire opal showing brilliant flashes of yellow and red, making remarkable cabinet specimens. Opalized belemnites of fine quality are seldom found. Some of the best and most desirable trade material is of this type of opalized marine life which sometimes appears as broken shells and other times as just massive lumps several inches thick, showing whitish opal with red and yellow flashes. This material is a favorite with the gem cutters.

One rare and exceedingly beautiful opalized fossil shows the complete paddle of a prehistoric reptile, and the bones of this same ancient creature are shown in an adjoining specimen also in a completely opalized state. Fine lumps of shelly appearing limestone, with the lines of the shells flashing with fine opal, are occasionally found and are very useful for solid pendants and other ornaments. Nodule-like masses of crystals resembling dog tooth calcite in form are completely replaced with opal in a light brown limestone matrix. Opalized fossil woods showing wood structure in a poor grade of yellow opal are noted occasionally with fine bandings of good quality opal.

Fossils of the opal-bearing sandstones are comparatively scarce and are described as belonging to upper Cretaceous age. They are silicious in composition, horizontally bedded and thought to be equivalent to the desert sandstone of Queensland. The opalization phase is a secondary product in the sandstones and limestones; the opal being deposited from percolating waters. The principal areas where fossils are found are White Cliff, Wilcannia, Baradine, Walgett and Lightning Ridge, all in New South Wales.

So far as can be learned the first reported discovery of jade in Wyoming was made by two Wyoming prospectors, Lloyd Curtis and William Marion. The discovery was made in May, 1936, near Split Rock, south of Lander. The noted Sweetwater moss agate locality is also near Split Rock. Curiously enough, the agate locality has been well known for more than 60 years, yet the jade was brought to light in relatively recent years.

The second jade discovery in Wyoming was made shortly afterwards by a sheep herder who, having heard reports of the first discovery, brought in a number of float samples which proved to be jade (nephrite variety).

This discovery was 48 miles southwest of Lander, out on the open barren hills. The jade in this locality was later found to be scattered over 25 square miles on the low lying hills. Agatized wood occurs associated with the float jade. In this region

the jade was found mainly on the ridges of the low hills, but specimens were also found down on the flats.

Since then a good many other localized discoveries have been made. In all probability the Lander region will continue to attract jade hunters for a long time to come. The surface material has been largely scattered by the early collectors, but the surface material probably represents only a small part of the total jade in the field. There are no surface indications to show where a mass of jade or a "pocket" may be resting just under the surface debris. Storms, cloudbursts and natural erosion will continue to bring additional material to light for an indefinite number of years, but never in the profusion as when the fields were first discovered.

New discoveries of extensive jade fields are seldom made in any part of the world. Without doubt the discovery of the Wyoming jade fields rates as the most notable gem deposit discovery made in the United States in many years.

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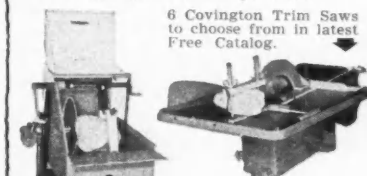
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36"	267.60		

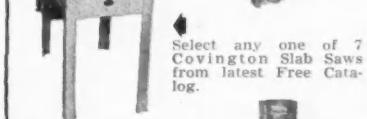
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GEMS AND MINERALS

The Romance of Rings

The earliest existing rings were those found in the tombs of ancient Egypt. The finest examples date from the 18th and 20th dynasties, and are of pure gold, simple in design, very heavy and massive, and usually bearing the name or title of the owner deeply engraved in hieroglyphic characters on an oblong bezel. Rings worn by the poorer classes were made of less costly materials such as silver, bronze or glazed pottery. Other materials used include ivory, amber and carnelian.

Archeologists know, however, that there were earlier rings. These were made of materials that crumbled to dust in the tombs, probably of braided hair, wood, etc., decorated with bits of shell and coral embedded in pitch.

The Greeks and Romans, who like the early Egyptians had used the ring as indicating distinction of rank or ownership of property, were perhaps the first to use the ring as a token of affection. In early Rome the first gift ring of a young girl about to be married carried the family seal. Given by her father in affection, it was practical too, because as mistress of a new household she was expected to use the seal on wine and food jars. Thus rings came into popu-

lar use as a sure way of always having on hand personal seals of title, family and ownership of property.

Over the centuries the original seal ring, as a type, gave rise to three classes of rings that exist today: initial, signet and emblem rings.

Initial rings usually are set with flat stones such as onyx or ruby, upon which initials are applied or encrusted. The modern signet ring as distinguished from the initial ring usually contains no stones. Monograms or initials are carved into the ring itself. An emblematic ring denotes membership in a fraternal, military, etc., group, and the symbol or emblem may be carved or applied on a stone or signet ring.

Birthstone rings had their origin in the ancient beliefs that certain gems were magically influenced by the cycle of the zodiac. Persons born in particular months felt protected and sure of good fortune when wearing the gem of their zodiacal sign.

Many rings have been found in the tombs of the early Celtic races in Europe. They were usually made of pure gold, often in the form of a spring. Some rings were made of gold wire fashioned into a rope. Some of the plain penannular rings were used in place of coins.

In 15th and 16th Century Europe, heavy signet rings engraved with a merchant's trademark, etc., became popular. Gentlemen of the era wore massive gold rings that carried family crest or coat of arms.

Poison rings have been popular both in fact and fiction. One kind of ring held a fatal dose of poison concealed beneath the bezel. When Hannibal was about to be

captured by the Romans, he took his life by swallowing poison carried in the ring he wore.

Most early wedding rings were plain gold bands. When faceting of gems became popular in Europe, the betrothal ring usually was set with a precious stone, often a family gem. Today the diamond has come almost to be traditional as the gem for an engagement ring.

Thus the ring—a circle with no beginning or ending—has come to mean many things—prestige, title, group membership, a gift of love, an ornament.—Glee Bridwell in the Convair Rockhounds Club of Pomona, California, *Rock Chips*

CALIFORNIA FEDERATION NAMES NEW OFFICERS

Howell Lovell of San Mateo has been elected president of the California Federation of Mineralogical Societies. Also named to office were Vervyle Carnahan, Compton, mineral vice president; Alden Clark, San Francisco, lapidary vice president; Lillian Coleman, San Francisco, secretary; and Ken Tharp, Whittier, treasurer.

These new clubs were admitted to the Federation: Hi Desert of Morongo Valley; Lake County Diamond Mineral Society of Lucerne; Manteca Gem and Mineral Club; Palmdale Gem and Mineral Club; Pyramid Gem and Mineral Society of Reno; Simi Valley Rockhounds of Simi; and Tehama Gem and Mineral Society of Corning.—*Rolling Stone*

Trading in amber has been carried on since very early times, and it was highly valued by the ancient Greeks and Romans. The Phoenicians were among the first to fashion it into necklaces and bracelets.

The old fire worshippers thought it to be the tears of a sea bird sorrowing for its mate. The sisters of Phateon, mourning and weeping his tragic death, were changed into trees, says another legend, and their tears, still flowing on, become amber.

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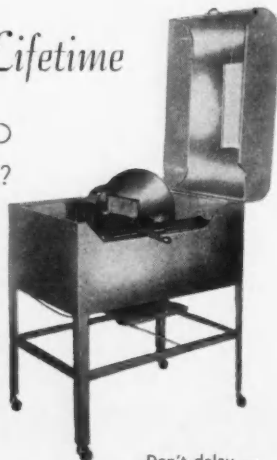
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A NEW MENACE TO ROCKHOUNDING

We rockhounds have recently been accused of hauling car loads of material back home from favorite hunting grounds. Stuff was disappearing rapidly from the desert, so naturally the average rockhound was blamed. We have been cursed for dynamiting, etc., when 90 percent of us know nothing of handling explosives.

This past week I dropped into one of our larger so-called "Building Supply" yards. Was I surprised! There among the ornamental rocks used for landscaping and rock gardens were tons of petrified woods, onyx, jaspers, rose quartz and those interesting sand concretions from the Salton Sea area. Enough material to satisfy a hundred rockhounds! And this is only one of the dozens of supply yards and nurseries in Southern California which retail rocks.

The new menace to rockhounding then is not the discredited little weekend hunter, but the "Commercial Truckers" outfitted with equipment to load stones weighing several hundred pounds. They are now taking the "cream" of the desert rock crop. The rockhound from now on will get only the "skim milk."—Jack Cluett in the San Fernando Valley, California, Mineral and Gem Society's *Rocks and Gems*

GEM IDENTIFICATION AT HOME BY USING HEAVY LIQUID TESTS

Bromoform (specific gravity 2.90) is probably the best liquid to use for home specific gravity testing. It is non-poisonous, cheap, and easy to use. It is diluted with Toluol or Benzene.

The experimenter should keep a small piece of quartz and a beryl (aquamarine) in the liquid to act as indicators. By adding Toluol a few drops at a time and stirring between each addition, the solution can be adjusted to a point where beryl sinks to the bottom and the quartz still floats. If the quartz starts to sink, merely add a few drops of the concentrated Bromoform.

By careful dilution it is possible to adjust the solution until an agate just floats and a rock crystal just sinks due to the fact that crystalline varieties of quartz such as amethyst, citrine, rock crystals have a slightly higher specific gravity than the crypto-crystalline varieties such as agate, carnelian, onyx, bloodstone, etc.

When this solution is adjusted, it can serve to check or test all the quartz varieties of which there are so many, and will give a very good indication of the beryls, feldspars and calcites which are fairly near to each other in density. By noting how fast a stone sinks or floats, one can, with experience, get a good idea of its specific gravity.

Methylene Iodide (specific gravity 3.34) is diluted in the same way as Bromoform, but the indicators used here are green tourmaline and fluor spar. The solution should be adjusted to a point where the tourmaline floats and the fluor spar sinks. Methylene Iodide is expensive and poisonous.

Clerici's Solution (specific gravity 4.3) is diluted with water. This solution is very expensive and extremely poisonous and great care should be exercised in its use. Ruby or sapphire are used as indicators (they should just float in the solution), and diamond and topaz also are used (diamond floats while topaz sinks). Clerici's Solution does not evaporate.

If a solution of Bromoform or Methylene Iodide is diluted too much, it can be returned to normal by pouring into a shallow saucer and allowed to stand uncovered for an hour or two.—Kenneth Hull in the Evansville Lapidary Society's *News Letter*

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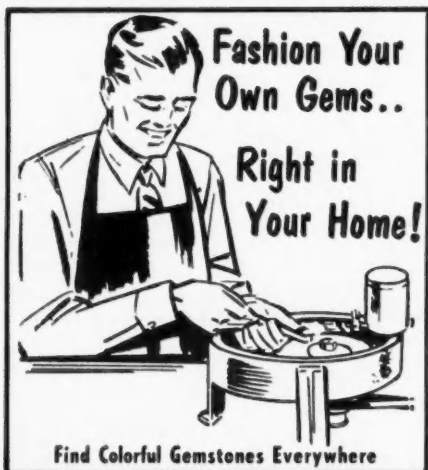
Newly elected officers of the Pasadena, California, Lapidary Society are: Tom Mahan, president; Dr. P. G. Schube, vice president; Aleta Purcell, secretary; Clarence Greer, treasurer; and Beatrice Lidell, federation director.

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MINERALS - FOSSILS

12 POUNDS OF beautiful Colorado mineral specimens, \$8.00 prepaid. Ask for list of others. Jack the Rockhound, P. O. Box 245, Carbondale, Colorado.

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Palladium, 717; Thallium, 740; Ruthenium, 767; Rhodium, 776; Hafnium, 830; Mercury, 849; Tantalum, 1035; Uranium, 1166; Tungsten, 1174; Gold, 1204; Platinum, 1333; Iridium, 1398; and Osmium, 1404.

Therefore, Osmium is nearly twice as heavy as lead.—*Glacial Drifter*

ANSWERS TO DESERT QUIZ

Questions are on page 33

- 1—Nevada.
- 2—New Mexico.
- 3—Navajo Indians.
- 4—Mesquite tree.
- 5—Grass.
- 6—Calcite.
- 7—Navigation of the Colorado River.
- 8—Bisnaga, more commonly known as Barrel Cactus.
- 9—Lizard.
- 10—Navajo reservation.
- 11—Utah.
- 12—Roosevelt dam.
- 13—Death Valley.
- 14—Capt. Cooke.
- 15—Encelia.
- 16—Dine—The People.
- 17—Shelter from the elements.
- 18—Ed. Schieffelin.
- 19—Little Colorado.
- 20—Superstition Mountains.

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FALL-WINTER Gem Show Dates

August 29-September 1—Morro Bay, California. Estero Bay Gem and Mineral Club's Gem Exhibit in conjunction with Morro Bay Art Festival.

August 30-September 1—Pasco, Washington. Northwest Federation of Mineralogical Society's 18th annual Convention and Show at the high school gymnasium.

September 4-6—Lancaster, California. Antelope Valley Gem and Mineral Society's show in conjunction with Valley Fair.

September 6-7—La Mesa, California. Tourmaline Gem and Mineral Society's 9th annual show in conjunction with La Mesa Art and Hobby Fiesta. Helix High School.

September 12-28—Pomona, California. Los Angeles County Fair's gem and mineral show.

September 13-14 — Antioch, California. Lapidary Club's show at Fairgrounds.

September 19-21 — Odessa, Texas. West Texas Gem and Mineral Society's show at Ector County Coliseum.

September 20-21—Long Beach, California. Mineral and Gem Society's show at Women's City Club, 1309 E. 3rd St.

September 20-21 — San Jose, California. Santa Clara Valley Gem and Mineral Society's 4th annual show at Armory, 155 W. Rosa St.

September 27-28 — Renton, Washington. Geology and Gem Club's show at Williams and Swanson display room.

September 27-28—Vallejo, California. Gem and Mineral Society's show at Teamsters Hall.

October 4-5—San Antonio, Texas. Rock and Lapidary Society's show at Witte Museum Auditorium.

October 4-5 — Eureka, California. Humboldt Gem and Mineral Society's show at Redwood Acres Fair Grounds.

October 4-5—Omaha, Nebraska. Nebraska Mineral and Gem Club's show at Rome Hotel.

October 4-5—Seattle, Washington. 4th Annual Seattle Regional Gem and Mineral Show, Civic Auditorium.

October 4-5—North Hollywood, California. San Fernando Valley Mineral and Gem Society's show at Victory-Van Owen Recreation Building, 12240 Archwood Street.

ABUSES TO FORESTS LISTED BY OWNERS

The American Forest Products Industries, Inc., disclosed why the public is unwelcome on private forest land. Studies show that in areas where the public was permitted to pursue recreational and other interests, the following flagrant abuses were observed:

Fire, 207; garbage litter, 196; shooting holes in signs, 192; broken gates and locks, 182; road damage, 185; thievery, 137; trespassing, 134; vandalism, 132; endangering employees, 98; slowing operations, 91; getting lost, 84; and just plain ingratitude, 134.—*Rock Chips*

October 11-12—Trona, California. Searles Lake Gem and Mineral Society's show.

October 11-12 — Coeur d'Alene, Idaho. North Idaho Mineral Club's show.

October 11-12 — Hollywood, California. Lapidary and Mineral Society's 11th Annual Lapidary and Mineral Show at Plummer Park, 7377 Santa Monica Blvd.

October 11-12—Topeka, Kansas. Gem and Mineral Society's show.

October 18-19—Des Moines, Iowa. Lapidary Society's Rockhound Roundup at Veteran's New Auditorium.

October 18-19—Hermosa Beach, California. South Bay Lapidary and Mineral Society's show at Clark Stadium.

October 18-19—San Francisco. Gem and Mineral Society's show at Scottish Rite Auditorium, 1290 Sutter St.

October 19 — Oklahoma City, Oklahoma. Mineral and Gem Society's show.

October 25-26—Burbank, California. L.E. R.C. Rockcrafters Club's 3rd Annual show at 2814 Empire Ave.

November 7-11—Barstow, California. 3rd Annual Rockhound Roundup and Auction (11 miles west of Barstow).

November 14-16 — Calexico, California. Imperial Valley Gem and Mineral Society's show at De Anza Hotel.

November 28-30 — Barstow, California. Mojave Desert Gem and Mineral Society's annual Swap Days.

November 29-30—South Gate, California. Mineral and Lapidary Society's 2nd annual show at Civic Auditorium.

Newly elected officers of the San Jose, California, Lapidary Society are: Guy Gibbs, president; Wm. Dogherra, vice president; George W. Gillespie, secretary; Harvey R. Richardson, treasurer; and Claire R. Rice, bulletin editor.—*Lap Bulletin*

Elgie Pfleging is the Santa Barbara, California, Mineral and Gem Society's new president. Also elected were: Mrs. Rett, vice president; Ken Castro, treasurer; Doris Castro, secretary; and Bill Stone, director.—*The Crystal Ball*

Dwight Heinz, president; Arthur Brown, vice president; Mary Dudley, secretary; and Dorothy English, treasurer; are the new officers of the Tucson Gem and Mineral Society.

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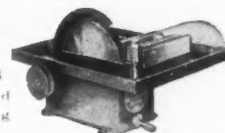
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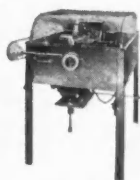
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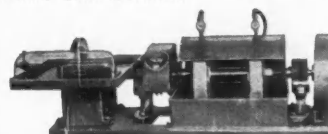
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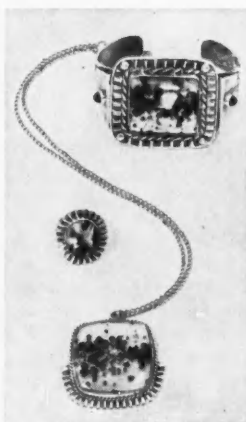
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By RANDALL HENDERSON

AN EDITORIAL WRITER on the *New Mexican* newspaper at Santa Fe has coined a new term—"political litterbugs." He refers to candidates for office who clutter up the roadside landscape with political posters—billboards, placards on utility poles, trees, fence posts, walls and even roadside rocks, often in violation of the laws.

In view of the rising tide of popular resentment toward those who deface the landscape with personal and institutional advertising, a candidate should think twice before he permits his name to be flaunted in this manner. The *New Mexican* suggests: "the voters appear to have reached the end of their patience with those who disfigure their countryside."

* * *

Recently a friend of mine accompanied the executive officer of one of the big Mojave desert military installations on a motor trip across a vast sector of desert terrain which the Pentagon hopes to acquire as an addition to its present holdings.

"What is it good for?" the officer kept asking.

Probably his question reflects an attitude that prevails quite generally among the big brass and braid of the Pentagon. To them, the arid lands of the Southwest serve no useful purpose—except as gunnery and bombing ranges for military training.

Unfortunately, their attitude is shared quite generally by Americans whose homes are east of the Rockies, or who have acquired through an inadequate education, the notion that nothing on this earth is useful unless it can be converted to monetary profit.

What is it good for?

There are many answers to that question: On the economic side, it is a place where strong men may seek the mineral wealth so necessary to an industrial civilization.

To the scientist, it is an open book where, better than anywhere else on this earth, the mysteries of creation and evolution, and of life and interdependence of life, may be studied. The biologist, the botanist, the zoologist, the geologist and the ecologist find in the desert a natural laboratory for field studies—and they come here from all over the world to carry on their research.

To the recreation-seeker the desert offers the pure air and sunshine so vital to health, and the space and solitude which folks in the crowded cities consciously or sub-consciously crave. More and more these remote desert lands are becoming a mecca for weekend homesteaders, campers, photographers, hikers, explorers, archeologists and mountain-climbers.

Most important of all, the remote canyons and mesas of this desert land offer silence and peace and the beauty that somehow restore faith and spiritual strength.

Population is increasing at an explosive rate. These seemingly empty desert lands already are attracting more

visitors than most people realize—and the number who come, like the population, also is increasing at an explosive rate.

* * *

According to a writer in the July issue of *Readers Digest*, the armed forces already have acquired 29,000,000 acres of the public domain, mostly in the desert West—and are wanting to grab another five or six million.

Many of us feel that it would not only be practicable but advantageous for the Army, Navy, Air Force and Marines to coordinate their aerial and gunnery training at the same installations—a type of coordination which surely would be necessary in time of war. Such cooperation undoubtedly would effect a saving of millions to the U.S. Treasury, and would restore to the public domain millions of acres now used only sporadically. It is a frustrating experience to find the old desert trails, the waterholes, the scenic canyons and the mineralized hills posted with No Trespass or Danger, Keep Out, signs—and no evidence that the lands are serving any useful purpose even for the armed services which have seized them.

On the Mojave desert of California, the Navy wants to add more land northwest of Barstow to the 600,000 acres it already has. And now the Air Force is asking for 40,000 acres in the same general area. San Bernardino County supervisors are opposing both of these land grabs.

I was chagrined when I learned this week that my own congressman, D. S. Saund, is urging the Navy to acquire another 68,000 acres in Imperial County, California, in addition to the 219,000 acres it already has just a few minutes away by air in the Chocolate range. When I protested to the congressman he merely replied that "the interests of national defense take precedence over everything else."

All of which has a very patriotic ring, but according to Congressman Engle of California, whose committee launched an investigation—as reported in *Readers Digest*—the armed forces are spending \$21,000,000 a year maintaining more than 200 idle installations, and 6,500,000 acres acquired for training purposes are not even being used. The Air Force admitted that 40 percent of its bombing and gunnery ranges are in excess of requirements.

Last March President Eisenhower signed the Engle bill which requires the armed services to secure congressional approval before seizing additional lands in excess of 5,000 acres. While this law apparently has not discouraged the admirals and generals in their quest for more public domain, it will at least give you and me an opportunity to protest seizures which we feel are an unnecessary encroachment on our desert domain. For we know many answers to the question: "What is it good for?"

BOOKS of the SOUTHWEST

NEW WAY OF LIFE ON THE HOPI RESERVATION

That the Hopis today have preserved so much of their tribal culture in the swiftly changing life of the last century is proof of its depth and richness. Harry C. James in *Red Man White Man* has used fiction, an entertaining and poignant story, to tell of this tribal culture. To know intimately the integrity, the fineness of character, the profound and moving warmth of the Hopi way of life has been Mr. James' good fortune. His book has evidently been written with the earnest and generous desire to share his rich experiences with those who have not had the opportunity at first hand to know the Hopis.

Mr. James has chosen the time just after the first World War when the young Hopis had come back from their service in defense of our country as the setting for his story. His tale shows graphically the beginnings of the great struggle which grows ever more difficult between the old life of the Indians on their ancient reservations, and the new life of the white man to which they have become exposed.

Young Jim Talestewa had been in the Navy and was torn between the comparatively free and easy life of the white man's world, and the life rigorous, strictly disciplined and firmly regimented by customs old and unchangeable of his own people. The same struggle was going on in the heart of a young Hopi nurse in the hospital at Keams Canyon. Their love affair and the hard decisions they had to make, give the reader much understanding of what all Indians are going through today.

The author gives insight also into the differing ways in which white men are acting in their relationship with our Indian countrymen. There were fine helpful missionaries, and fanatical ones who did more harm than good;

businessmen honest and friendly in their dealings with the Indians and those who took every advantage. Readers of *Red Man White Man* will be richer in knowledge and understanding of the Hopi way of life and this reviewer regrets that there is not more of the simplicity, integrity and independence of that way in all of our American life.

The delightful design and decorations by Don Perceval add much to the charm of the volume.

Published by The Naylor Co., San Antonio, Texas. 286 pp. \$5.00.

HANDBOOK ON ARCHEOLOGY FIELD METHOD TECHNIQUES

Among *Desert Magazine's* readers are many who have more than a passing interest in objects of antiquity, which they frequently encounter in the desert outdoors. More and more amateurs are donating their services to recognized institutions, aiding in the work of excavating prehistoric sites under the direction of trained personnel, or directing scientists to newly discovered locales.

Recently printed was the third revised edition of *A Guide to Archeological Field Methods*, edited by Robert F. Heizer, which the growing number of weekend archeologists will find of real value.

This handbook, first written in 1949 by a volunteer group of University of California Department of Anthropology students, stresses the need for making archeological data culturally meaningful. Techniques for site excavation, stratigraphy, archeological photography, artifact care, etc., are described and evaluated.

Published by the National Press, Palo Alto, California; illustrated; references and index; 162 pages; \$4 paper; \$5 cloth.

TWO BOOKS ON ARIZONA IN THE EARLY DAYS

Elizabeth Lambert Wood, pioneer Arizona author, has written two slim volumes of interest to Western book devotees:

The Tragedy of the Powers Mine is an objective account of the ill-famed World War I days occurrences in Graham County, Arizona, which inflamed the passion and prejudice of the state. Mrs. Wood faithfully reports the events which led up to the murders at the mine, transforming stubborn opinionated backwoodsmen into fugitives pursued by an estimated 3000 men, one of the largest man-hunts in West-

ern history. Published by Binford & Mort, Portland, Oregon; hard cover; 63 pages; \$2.

Arizona Hoof Trails is the personal account of Mrs. Wood's early days at Oracle, Arizona. These were adventurous times, and the author's wide interests result in a very enjoyable narrative. Unlike most pioneering stories which play heavily on hardship, Mrs. Wood seems to have been too preoccupied with living a full life to regard inconveniences as calamities. Her main concern in this story is with people — good and bad — who faced the task of starting new lives in a new land. Published by Binford & Mort, Portland, Oregon; hard cover; 82 pages; \$2.

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5. *California Through the Ages*
William J. Miller\$6.50

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* * *

"You know what a miner is? He's a liar who owns a hole in the ground."

* * *

"If you want to lose money, take the advice of a mine owner or a man who works in a mine. You hear a lot about how much money prospectors make, but you don't hear much about how many of them the county buries. I'd say the county buries all of them."

* * *

"I was sure unlucky that day. If it had been raining soup, I'd have been out with a fork in my hand."

* * *

"Been a hot day, ain't it? Reminds me of the time I am out in the yard digging a hole when a lady stops and says, 'It's too hot to be doing that. Don't you know it will cook your brains?' I say, 'Lady, if I had any brains, I wouldn't be out here digging this hole.'"

* * *

"In a few years, the scarcest things will be a horse, a locomotive, and a working man."

* * *

"I got four things to live by: Don't say nothing that will hurt anybody. Don't give advice—nobody will take it anyway. Don't complain. Don't explain."

* * *

"So many free schools and so much ignorance!"



"Once I'm at a bankers' meeting. There's a lot of whoop-de-doodle about getting the con-fie-dence of the people. Everybody who gets up has something to say about the con-fie-dence of the people. After a while they ask me to say something. I says, 'It's not the con-fie-dence of the people we need. It's bigger jails for bankers!'"

* * *

"An honest man don't need no monument."

* * *

"When you're out in the desert at a hundred and twenty with a hungry jackass and no water, you don't see no pretty sunsets!"

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